above-mentioned case. These colonies became more abundant twelve hours later.

Microscopically the organism was found to be a micrococcus arranged in clusters. The micro-organisms were Gram-positive.

THE PROPOSED CORONERS BILL.

BY

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THE following has been written in the hope that it may help to formulate opinion in the medical profession upon the proposed Coroners Bill, which, it appears to me, demands from medical men a close study as to its provisions and a clear insight as to its probable effect upon them, the public, and the State.

In spite of the fact that the proposed Coroners Bill was accepted, approved, and, one might almost say, blessed, at the last Annual Meeting of the British Medical Association held in London, it may be well, now that there will of necessity be some time to wait before it can be presented to the Houses of Parliament either in its present or in an amended form, to review its main provisions, and to see how they would alter what is the present custom and how they would affect the doctor.

This proposed bill naturally divides itself into two parts—namely, the one which deals with the coroner, his appointment and function; and the other which deals with the certification of death.

The first part of the bill may be dismissed with only a reference to the conditions of appointment of a coroner, for that is the only part that intimately concerns us.

It is generally well known that medical men have from time to time expressed their dissatisfaction with the way in which some coroners interpret their duties, and with the inefficiency of some owing to a lack of even a rudimentary knowledge of medicine. As is well known, a coronership need not be confined to the members of the two professions of law and medicine, for any one with sufficient knowledge, if adjudged a fit and proper person, may be appointed. In practice, however, this old office is now held either by a doctor or a lawyer—in the majority of instances by a lawyer—and the appointment once made is for life.

Medical men maintain that a coroner should possess not only a rudimentary knowledge of medicine, but a considerable acquaintance with it, because the work is often of such a nature that it can only be properly interpreted by a medical man, and that all a man with such a training requires is an elementary course of instruction, not in law, but in dealing with evidence and how to sift it. A lawyer thinks his knowledge of law is all that is required, and that any medical evidence he may need will be forthcoming by the summoning of a medical man to attend. Now, in the proposed bill the appointment is to be given to a barrister or lawyer of five years' standing or to a doctor with a degree in law, or one registered as a barrister or lawyer. The law man's attitude is upheld—the doctor's is disregarded. The doctors' complaint about coroners was and is now made, not in their own interests, but in that of the public. Our suggestion is that all coroners under the present régime—be they lawyers or barristers—should possess before appointment at any rate an elementary knowledge of medicine in all its branches; but the lawyers have up to the present prevailed, for what is in the bill amounts practically speaking to this—all coroners must be lawyers or barristers, and if one be a doctor in addition, all well and good. The doctor, who has almost invariably during the history of this important office made an exemplary coroner, is in the future to possess either a degree in law or be a barrister or lawyer. The barrister or lawyer has only to show he has been in practice for a period of five years, whereas the doctor must, in addition to his professional attainments, gain a degree in law—perhaps the easiest way to qualify. Thus an additional burden is thrown upon the doctor and practically none upon the lawyer. The doctors confess in their innocence a knowledge of law would be of advantage to them in acting as coroners, but the lawyers are self-sufficient, and consider themselves quite equal to the work, even if they be ignorant, as some of them can be, of any medical knowledge. If the medical profession be content with the proposed alteration it can be of but little use to draw attention to the distinction of treatment meted out to the doctors and lawyers in this new bill. I, for one, will be sorry to think that our successors may, and with justice, say we were sold at such and such a date—meaning the passing of this or a similar Coroners Bill. If the legal profession is the stronger, let us submit for the present to our luck, bad as it may be, but let us not acknowledge that the lawyers are in the right, for the sake of the community.

CERTIFICATE OF DEATH.

The conditions for filling up a certificate of death at the present time places no other obligation upon the doctor than giving to the best of his ability the cause or causes of death. The information as to the death, the identification of the body, and the fact that the person is dead, are all given to the doctor by the informant, and it is no part of his duty to investigate one or all of them. All he does is to fill up the form and hand it to the applicant, who takes it to the registrar in order to obtain a burial certificate. Accordingly, some one who knows the person, and who knows he or she is dead, applies to the doctor, who certifies to the cause or causes of death, so far as he knows them; there the duty of the doctor ends, and this service he renders, by compulsion, it is true, to the State free of charge.

Under the present proposal, as embodied in the bill, notice of the death is not to be sent to the doctor. But, within twenty-four hours of the death of a person, the doctor must proceed to view the body and then to identify it, see it is actually dead, and then fill up and sign the certificate and post it to the registrar. Thus, in addition to filling up the certificate free of charge to the State as formerly, he is further compelled to see that it is So-and-so, that he is dead, and then to duly post the certificate to the registrar. The inspection of the body of a dead person is made for two purposes, at any rate—(*a*) to identify the person, and (*b*) to see that he or she is actually dead. Identification of the body is very important, and so is the examination of the body with the view of seeing whether life is extinct, and in a well-regulated State reasonable means ought, we would all agree, be taken to ensure this being done.

First, as to the identification of a corpse. Who is in a position to identify the body of a dead person? Not the doctor, not the police, no one except the relatives or person who lived with and knew the deceased. The doctor is not asked in a coroner's court to identify the body, for a very good reason. An inspection of a dead body by a doctor would be of no more value than an inspection by a stranger, except in places where the doctor is familiar with his former patient. In big towns, for example, an inspection by the doctor called in casually, perhaps, could be of little, if any, value, and in small towns and in the country it would be superfluous and lead to nothing but vexation to the relatives and to the doctor.

Secondly, as to evidence of death. Judging from the number of cases in which there is genuine fear of being buried alive, it is necessary that doctors should regard the subject seriously. To determine whether a person is dead or alive is no easy matter; mere inspection of a body, feeling whether it is warm or cold, trying to count or detect the respiratory movements or the cardiac impulses, are all uncertain and not worthy of consideration, if the object be to determine actually whether life be extinct or not. So far as I can gather, it is necessary to perform something that will revive the ordinary signs of life without any dubiety, and yet such as will not interfere in any way with complete restoration to life should it be present. Venesection, as commonly performed fifty years ago, would, I think, serve the purpose, because it would certainly wake the person up, and would not in any way interfere with complete restoration to life. Every doctor could perform the operation, and no one need be buried alive provided some one or the State directs that such an operation of skill be carried out.

Therefore, in connexion with identification, the doctor will be of little value; but in order to make sure a person is actually dead a doctor must be employed, and he must by some means make sure in each case; indeed, he must

of necessity venesect or do something that will actually determine whether life be present or not. To do the one he is practically useless; to do the other he must exercise his skill and knowledge, again at the bidding of the State, and, as it is proposed, without reward or remuneration.

We may well ask, Is it right to order a man to perform a duty that he is for all practical purposes incapable of carrying out? Is such service of any value? The answer to the first question is emphatically, No; and that to the second is that it pays no one—not even the State—to obtain valueless information. In by far the majority of cases the question of identification is immaterial, but in a few it is of the utmost importance to the State that identification should, if possible, be made out; but no medical man could undertake such work, even if he had time on his hands and wished to offer his services to the State.

The medical man, on the other hand, is the only person in the community who can establish the fact whether a man is dead or alive, and in order to do so he must exercise his skill and knowledge, for both of which he had to pay, as well as for the privilege of exercising them. The State, however, if the proposed bill becomes law, demands the doctor's time, skill, and knowledge without thanks, reward, or remuneration, as a contribution to the State—a contribution in addition to that which each and every member of the community (doctor included) has to give in the way of payment of taxes. Accordingly, the State wishes to demand from doctors not only their due in the form of taxes, but also a proportion of their time and the exercise of their skill and knowledge. The doctors will thus be taxed not only in money, but in service, which no other member of the community can give, and which, I may add, no other member of the community, even if he could, would dream of giving without an adequate remuneration.

A great question of principle is at stake in the proposed Coroners Bill, and a mere demand for payment to the doctors for work done is not, to my mind, an adequate response on our part; even if this demand were conceded, the changes would not, so it seems to me, be to the advantage either of the State or of the members of the medical profession, for the scheme is fundamentally wrong. Great changes can be satisfactorily dealt with—that is, dealt with in such a way as to make an alteration which will form a substantial basis for future progress—only when clear-cut principles are laid down and a machinery devised in harmony with such principles.

If we seek for the objects of the promoters of the proposed Coroners Bill, it will be seen that they may be resolved into the following:

1. To obtain a better trained officer as coroner.
2. To secure a better plan for the registration of death.

All I need say upon the first object has already been said. With regard to the second object there is a great deal to say and much to consider—because the consideration of this leads to a review of the work of registration of births and deaths, to the exposure of our present system of a want of a register of the people living in any community, and to the contemplation of the proper conduct of such work for the advantage of the State. The registration of births and deaths has been in force since the year 1836, and in consequence the State possesses information as to the number of births and deaths which may occur in any given time. With regard to the deaths, there is not only a registration, but also an attempt, more or less successful, to classify all the causes of death. The information thus given and collated helps those in authority to see the distribution of diseases, and to find out whether something can be done to prevent premature loss of life. (The registration of births and deaths is in the hands of a lay person who merely records the information sent or given him.)

The object in view clearly is to place in the hands of the State knowledge of all the additions by birth and the subtractions due to death, and so to obtain a register complete as to births and deaths in the whole country. Additions and subtractions due to immigrations and emigrations respectively are not recorded, and there is no register of such persons that is available for State purposes. Were such a register compiled a complete list of all in the country would be available. Every ten years, however the State does find out the exact number of persons in the country on a particular date. The changes which have taken place in the intervening years are neither recorded nor taken heed of. It will be observed that the decennial census register is for the whole country—the State as a whole, and the information obtained in the census is for the central office, each locality receiving back only numbers showing its own position.

Although we have the machinery for the making of a local register which, so far as it goes, is pretty complete, yet we do not possess an official register of the inhabitants of any locality. All we possess is an unofficial local directory of the householders and a list of ratepayers and voters, neither of which can be regarded as a complete register of the inhabitants.

Is such a local list desirable, and if so, what purpose would it serve? There can be no doubt that every community should possess a complete list of its inhabitants, to which additions from births and subtractions from death should be duly registered as they occur. Besides, lodgers who come and go should have a place as well as those families who depart from or come to reside in it. In this way a complete list of every community could be got and kept up to date without much expense. Whether a decennial census would then be necessary or not could, after a short experience, be determined. The purpose served by such a local register of the inhabitants would be (*a*) for use to the police authorities, and (*b*) to the Public Health Department. The police would know the to-and-fro movements that take place in a community, and the medical officer of health would be in possession of information invaluable to him in tracing the origin of infectious diseases, etc., and in giving accurate estimates in the statistical information he compiles periodically. With such a register for every locality, the notification of births, not the registration of names, etc., becomes a reasonable step forwards, because it brings to the notice of the medical officer of health—not, be it noted, the registrar of births and deaths—an event which may be attended with danger to other members of the community, and which may require the help of the State to preserve and promote the life of the infant. Further, the identification of a dead person desired for in the Coroners Bill becomes a simple matter, for that would then resolve itself into the simple question, Is the dead person Mr. So-and-so, who has lived in a particular house? One person may personify another, but the deception would soon be discovered if placed in the hands of the proper authorities for detection. Both these purposes are of immense importance to the State, and the wonder is that we do not possess an official register of every locality in the country. The want of such an official register hampers the police in the efficient conduct of their duties, and is perhaps the greatest defect at the present time in the public health service.

I take it that the objects of the State as shown in the bill will find support, and a cordial one, in every doctor throughout the land. A proper legal inquiry into the causes of death where not known, identification of the dead person and a certificate that death has actually taken place, would only give information that the State ought to possess. To obtain all this it is necessary to have the services of a man trained in the law, another trained in settling the question of identification, and another to find out if death has actually taken place and from what cause or causes. It is not likely that these three functions will be found combined in one person. We know that neither a lawyer, a doctor, nor a detective, often combines them, and such an one would be a rare bird.

The promoters of the proposed Coroners Bill realized that, to make the proper inquiry into the manner in which death was brought about and its immediate cause, it is necessary to obtain a man trained in law—a barrister, lawyer, or doctor with a degree in law. To me this seems reasonable and quite sound.

When, however, they put upon the doctor, who had been in attendance upon the deceased, the duty of finding out when death occurred and to undertake the task of identification, then I think it is time for the members of the medical profession to wake up and declare that by their training they are not fitted for either duty. How, indeed, can a doctor find out when so and so died? Surely someone who is cognizant of the death should inform him. His business is to be at the service of the living and not to

seek out death. Again, when it is thought that a mere inspection of a body within twenty-four hours of the supposed death is sufficient to warrant a doctor in declaring life is extinct, ignorance of the difficulties in the determination of the presence of or absence of life can be the only excuse. In most cases a layman's testimony is sufficient, but in a few the task would test the best of us.

The demands of the bill have already been criticized, and now it may well be asked, How do you propose to carry out the objects the promotors of the bill have at heart?

Now, given a local register in the hands of the medical officer of health, I would suggest the following:

1. When a death occurs the relatives to notify the police.

2 The police in case of a natural death to inform the doctor who was last in attendance.

3. The doctor, if he is satisfied, to sign a certificate and to give it to the police officer to take to the local medical officer of health's office, where it should, if in order, be registered.

4. The medical officer of health to grant a burial certificate and the police officer to convey it to the relatives. (In case the doctor declines, or there are some difficulties in the way of signatures, then the medical officer of health should prosecute inquiries and make or order to be made a proper medical examination of the body of the deceased.)

5. In case all be explainable by natural causes, the medical officer of health should then issue a burial certificate; if no such explanation can be put forward, the medical officer of health should ask the coroner to undertake the necessary legal inquiry.

6. In all cases of accident, suicide, etc, the police officer to communicate direct with the coroner, who would call for the services of the medical officer of health for the district to aid him in every way through his special medical officer to find out the cause or causes of death.

Such is the outline of the scheme I would advocate, and I venture to think that the objects of the promoters of the Coroners Bill would be attained in a far simpler and less costly way than that put forward.

If, however, the State requires the application of a test as to whether a body is alive or dead, the State should be prepared to pay for the performance of an operation of skill, be it venesection or anything else, and the proper person to perform such is the general practitioner in attendance during the life of the deceased.

In conclusion, all I have to say is that those who are concerned in this matter should soon take steps to put into shape their own ideas and present them to the proper authorities before the bill is again proceeded with, and so avoid increasing difficulties in obtaining amendments.

THE PITFALLS OF "MENTAL TESTS."*

BY

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IN this country at least psychology seems likely to suffer from the same dangers of popularization as have for years past been affecting anthropology. Just as it has been widely supposed that only a printed book of instructions and queries need be read for an amateur to sally forth into the field and collect reliable physical measurements, or trustworthy evidence of social organization, so there appears to be starting a belief that no special course of training is necessary in order to conduct on a large scale investigations of a psychological nature.

Folk are loth to recognize that the younger sciences—for example, economics, genetics, psychology, education—demand as much adequate preparation and study as the older before reliable work can be undertaken in their respective fields. Certainly every one thinks himself capable of discoursing and deciding about themes of psychological interest. Royal and Departmental Commissions, which do not contain among their members a single psychologist, are appointed to report on matters which are fundamentally of psychological concern. The psychologically untrained physician does not hesitate to pronounce on the psychology of insanity, nor the biologist on human and animal intelligence and instinct.

I want to protest as strongly as I can against the notion that any useful purpose can be served, so far as psychology is concerned, by collecting masses of psychological data with the help of an army of untrained observers. I have heard it confidently asserted that the gross errors inevitably arising from inaccuracies and inconsistencies of procedure among different observers cancel one another in the long run of such vast numbers of measurements. Nothing, I think, can be more dangerous or false than this idea that the untrustworthiness of crude methods diminishes as the number of observers increases. It involves the assumption that in the long run errors occur to an equal extent in opposite directions—a most unlikely hypothesis.

Individual differences in mode of measurement are great enough even in anthropometry, despite the standardization of measurements. There is, I believe, a well-founded rumour that when the pigmies visited this country and were independently measured by several observers well practised in anthropometry, the results obtained by these observers were startlingly divergent. If this be so, the sooner the fact is put on record the better for the future security of anthropometry. In any case I am sure that hitherto it has not been adequately realized how untrustworthy is a comparison between the measurements obtained by different observers upon the same individual. I can only give one or two actual examples, but these, perhaps, are sufficiently striking. Professor Cunningham and Mr. Browne measured the heads of several anatomists at a meeting of the Anatomical Society some years ago. One of their subjects gave a head length of 198 mm. and a head breadth of 147 mm.—that is, a cephalic index of 74.24. The same individual happened to be measured subsequently by Miss Alice Lee, fully as competent an observer, who obtained a head length of 195 mm. and a head breadth of 150 mm.—that is, a cephalic index of 76.92. Thus there was a divergence of over 3.5 per cent. in the values of the index obtained from the same individual by these observers, although each claimed to be taking precisely the same measurements—the maximal head length and the maximal head breadth.

A similar experience befell me only a short time ago. My head was measured by an observer who had for some months been engaged in making a vast collection of anthropometric data. He entered my head length as 202 mm., my head breadth as 168 mm.—that is to say, a cephalic index of 83.2. Doubting whether these data were accurate, I took the calipers in my own hands and obtained a head length increased by 4 mm. and a head breadth diminished by 2 mm., yielding a cephalic index of 80.6. The latter I know to be approximately correct.

If inaccuracies to this extent occur when anthropometry is in the hands of fairly-trained observers, what must be their size when the measurements are undertaken by the interested amateur! And, if they are great in measuring the *physical* characters of man, what must they be in measuring the *mental* characters! For here we have not only the dangers arising from the improper use and reading of the instrument, but also the different effects upon the subjects' mental condition produced by different observers. One observer knows his subjects well, another awes them by an unsympathetic attitude, while another unconsciously helps them by suggestion.

We have the further difficulty that it is impossible as yet to standardize mental tests as we have standardized physical measurements. Far more laboratory work is necessary before such fixity becomes possible or desirable. The approved test of to-day is rejected to-morrow.

But I will leave these difficulties on one side and pass on to the *purposes* of this wholesale application of "mental tests." One of the objects is to discover by statistical means the differences which exist in different communities. A vast number of measurements of a given character is taken in one community and an equal number of measurements of the same character is taken in another. The averages of the two series are compared, and the conclusion is drawn that an undoubted, or a probable, or no certain difference exists between the two communities in respect of this character. As is well known, the certainty of the difference depends not only on the number

* A paper communicated to the British Association for the Advancement of Science, at the Sheffield Meeting, 1910.

of observations, but also on the relation between the amount of the difference and the uniformity of the individual measurements within either community. If the individual measurements within a community differ widely from one another, it is obvious that the difference between the averages must be proportionately wide, in order to be certain that it is not merely accidental. Now, so far as the physical measurements of mankind go, they do differ enormously within a given community. They differ so widely that it may be said that statistics can seldom give us any *new* information as regards racial differences of measurements. Statistics serve, as a rule, but to establish and to give a measure of *observable* differences. Statistics cannot inform you that one community has broader noses, darker skins, more curly hair, or greater stature than another, unless that character is manifest enough to be apparent to the non-statistical eye. And if this be true as regards physical characters, it holds yet more strongly in respect of mental characters, inasmuch as they exhibit still wider individual variation within a community. For these reasons we must be chary against expecting from statistical manipulations more striking results than from the very nature of the data they are capable of yielding.

I am fully aware that these opinions savour of heterodoxy. I shall be asked, Are those not striking and new results which have been lately reached by statistical methods, showing the absence of correlation between the state of nutrition of school children and their mental capacity, or between alcoholism in the parent and defective health in the offspring? And I reply that, in my opinion, these results have no real value. They have been obtained by applying scientific methods to the solution of a problem of such complexity that the solution appears in the form of a meaningless blur.

The plain man believes that "One can prove anything by statistics," and I fear that such time-worn sayings have a certain basis of truth. For the wholesale collectors of measurements are apt to pay too little regard to the complexity of the conditions influencing the problem and the material which they are gathering. All they desire is an enormous mass of data, and these—good, bad, comparable, and non-comparable—they pour into the statistical mill with the object and result of arriving at conclusions statistically invulnerable. Into this mill, for instance, they pour all the data concerning the relative efficiency, physical and mental, of the children of drunken and sober parents, practically regardless of the question as to whether the parents are strong, robust folk who are abstemious, or, say every Saturday night, regularly indulge in intoxication, or whether they are feeble workmen of the sober "good young man" type, or weakly degenerates, inheriting and transmitting disorders of nervous instability so closely associated with tendencies to crime and to chronic alcoholism.

Similarly, in dealing with the relation of mental capacity to bodily nutrition among children, a recent investigator has been content to take the verdict of school teachers on the mental capacity of their school children, with the result that some teachers classified 33 per cent., others only 1 per cent., of the children as brilliant! On the ground that the ablest parents can provide the best nutrition and transmit their ability to their children, it might be argued *a priori* that dull children would not be so well nourished as bright children. And this conjecture is supported by earlier trustworthy evidence. On the other hand, its *raison d'être* can only hold for the lower and lower middle classes, and we have the further complication that unwholesome food may produce a false appearance of good nutrition. Apart from food supply, exceptionally bright children are worse nourished, and exceptionally dull children are better nourished, than the average child. These complications should no doubt be taken into consideration, as should such factors as employment outside school hours and the mental and physical condition of the parents. When all these counteracting influences are thrown into the statistical melting pot, is it surprising that the result is a mere blur, showing an absence of significant correlation, a small correlation in one direction in one school and in an inverse direction in another?

This neglect to analyse and to take heed of what is actually being measured is specially prone to occur in the use of mental tests. In other sciences there is little or no real difficulty in observing what we are measuring, if only the experimenter take reasonable care. But in psychology we can only ascertain what we are testing by recourse to introspection on the part of the subject. To neglect introspection in psychological experiment is usually to court certain disaster. If we are in total ignorance of what has been going on in the mind of the subject during the experiment, it is rarely possible to argue from the objective data—from the measurements which it yields. For example, we may be trying to determine whether any correlation exists between sensory discrimination and general intelligence. A positive result may be simply due to the fact that the very nature of the test has compelled the subject to use his intelligence while carrying out sensory discriminations. We may be correlating mental ability with mental fatigue, and neglect the fact that sometimes we may not be measuring fatigue at all, that in some subjects the task becomes automatic, in others tedious, or that boredom may be in others overcome by motives of duty or ambition. We may be testing the visual acuity of two persons and obtain a different result from each, despite the fact that really they have the same visual acuity. The result may be due to the fact that the one subject strains every effort to interpret what he but dimly sees, while the other only reads what he believes he can clearly see. Thus again we merely obtain a blurred or erroneous result from the blind applications of statistical methods to measurements which are really meaningless owing to our failure to analyse the conditions determining the character we are measuring.

The danger of drawing conclusions from too small a number of subjects is well illustrated in the results of an inquiry recently conducted into the correlation between ability in mathematics and ability in classics in the various forms of a public school. In the highest form, the correlation was found to be +0.20; but in the following year in the same form it amounted to +0.52. In the form below it was +0.23, in the next lower form +0.76, and in the next −0.25.

But there is likewise a pitfall from the use of a large number of subjects, and this I will illustrate, as before, by analogy from physical anthropology. It is obvious that if you determine the correlation between head length and head breadth for one race or for one ethnic element of a mixed people—for example, the Cornishman in our own country—we shall find this correlation to be quite different from that obtained from another race or for another ethnic element of a mixed people—for example, the East Anglian. There can be no question about the existence of similar difficulties with regard to the correlation of mental characters. How wide the racial differences are in the correlation of mental characters is, of course, unknown. But no doubt at one time in a given class or school of our heterogeneous population the ethnic diversity may be small, at another time it may be great. At one time one racial element may preponderate, at another time another. This possibly is one explanation of the marked discrepancies obtained by different observers and by the same observer at different times, using the same mental tests as far as possible in the same manner. It provides yet another confirmation of my thesis that the wholesale collection of measurement is apt to give us only a very blurred and often a very inaccurate picture of the factors which really underlie the problem under investigation. It fails to give results of psychological value, because the psychological standpoint, the experience of the individual, is neglected. It is only too apt to obscure actual correlations or to reveal spurious correlation because insufficient care is taken to analyse the conditions which are really at work during the experiments. It leads to inaccurate results owing to the errors arising from individual differences in applying the tests.

For these reasons I urge extreme caution, at least for the present, in standardizing "mental tests" and in popularizing their use. In some forms, no doubt, tests can be usefully applied *en masse*—for example, with the object of determining the standard of intellect which a boy of given age should attain in order to class him as suitable or unsuitable to be taught in an "ordinary" or a "special" school. But such tests are "tests of pro-

duction," not "mental tests." They determine how *much* an individual can work, how *much* he knows—not *how* he works, *how* he knows. A man's productivity, of course, is what we want to ascertain in everyday life. We do not care how a man comes to use or to acquire his powers; we are content with a mere dynamometric or other record of his prowess. From this aspect, mass experiments must have *some* value. But this aspect cannot properly be called the psychological aspect.

Memoranda:
MEDICAL, SURGICAL, OBSTETRICAL.

A CASE OF URAEMIC APHASIA.

ON January 13th I saw, in consultation with Mr. J. H. Blakeney, of Cheltenham, a gentleman, aged 53, who had been seized on the previous day with loss of the power of speech; when I visited him, this had passed off, and only a little slowness in articulation was noticeable. There was no loss of power on the right side, and the plantar reflex of the right foot was flexor. The knee-jerks on both sides were exaggerated. His pulse was hard; the apex beat was not displaced; urine 1014, acid, haze of albumen, no sugar, deposited a few slender granular casts; eyesight normal. He was well developed, sparely nourished, but muscular; not cachectic-looking, and had been a great athlete.

The history was that at the age of 20 he had an attack of acute nephritis; he was ill six weeks, but was supposed to have made a good recovery. Fifteen years ago, however, he was rejected for life insurance on account of the presence of albumen in the urine, and he had had frequent attacks of gout during the last fifteen years. He had a profuse epistaxis eleven years ago. In May, 1909, he was found standing by his dressing-table unable to speak; he vomited and was put to bed; there was no definite hemiplegia, but he said afterwards that his right hand felt numb. He recovered in about a fortnight, but has never since resumed his occupation. In July he had an attack of convulsions, after which he was unconscious for twelve hours. In September he had his second attack of aphasia, with a slight loss of consciousness, lasting for a few hours. Later in the same month he had two attacks of convulsions followed by unconsciousness and violent delirium. In March, 1910, an attack of aphasia with slight unconsciousness was followed by delirium and mental symptoms which lasted six weeks. In September he had another attack of aphasia; in November his pulse became very slow, the rate falling to 26. Early in December there was a slight aphasic attack, and on January 12th of this year another for which I saw him.

Although transient aphasia is mentioned in most textbooks as one of the phenomena occasionally observed in uraemia, it is sufficiently rare to justify me in asking permission to publish these brief notes. Few cases are to be found in looking up standard writers on Bright's disease, but one was published by the late Sir T. Grainger Stewart,[1] in which transient aphasia was associated with facial paralysis and some weakness of the right arm, and there is another in Dr. Samuel West's Lettsomian Lectures (p. 139), in which the patient had recurrent attacks of right hemiplegia with aphasia extending over eight years; there was no albuminuria, but the arteries were thickened, and there were "two small patches of degeneration of the ordinary kind in the right eye." In Mr. Blakeney's case there is no doubt of the presence of chronic renal disease; the uraemia associated is attested by the occurrence of convulsive attacks, and it is noteworthy that the aphasia was not attended by hemiplegia.

Birmingham. ROBERT SAUNDBY, M.D., F.R.C.P.

TREATMENT OF PERNICIOUS MALARIAL FEVER.

IT is well known that red blood corpuscles containing malarial parasites are more easily disintegrated than normal non-infected blood cells. This gives us a clue to the treatment of pernicious cases of fever which one comes across now and again in the tropics, and which are almost invariably so fatal. I refer more particularly to cases of the comatose type, resembling in many aspects a bacterial meningitis. These cases present a profound toxaemia associated pathologically with a conglomeration of infected erythrocytes in the cerebral capillaries.

Rogers has been showing for the past two years the value of hypertonic saline solution in cholera. In the treatment of severe malarial conditions we desire, if possible, to produce an effect of another kind, although also by a temporary alteration in the saline content of the plasma. It is one in which the blood plasma is more diluted, giving those red blood corpuscles which are infected a greater opportunity of disintegrating and allowing quinine to act more immediately on the malarial organism.

This can be done by the transfusion of a "hypotonic" saline solution (30 grains to 1 pint). The osmotic pressure within the red blood corpuscles, if the injection has been carried out at the rate of quite 20 ounces in ten minutes, becomes relatively a negative one, and to a certain extent it is selective in that it is accumulative in affecting more readily those cells whose resistive powers have already been weakened by being organismally infected. To take advantage of this alteration it is of course necessary that the patient's circulation contain an effective amount of quinine ready to deal with the organisms, possibly nascent in the plasma, or at any rate more easily reached in the intracellular osmotic ebb and flow. To get this effect it must be borne in mind that rapid introduction of hypotonic saline is necessary, as interaction with the tissue fluids in a very short time diminishes the positive osmotic pressure of the surrounding plasma with regard to the corpuscles *pari passu* with its saline content quickly reapproaching the normal limit, which, considering the amount of blood in the body, can only have tended to produce the laking effect to a small extent.

Although it is unlikely that much actual laking takes place, even in infected erythrocytes, still the very changes occurring in the tension of the plasma must react on the corpuscles, and involve interchange of fluids, which, containing even minute percentages of quinine, must have an effect the reverse of salutary for the invading haemosporidia.

D. M. C. CHURCH,
Gyantse, Thibet. Captain, I.M.S.

CONGENITAL ABSENCE OF ONE KIDNEY.

THE extreme rarity of the anatomical condition found in the following case demands in the interests of the profession a brief record.

A. E. S., a married woman, aged 58, was found drowned in the Regent's Canal on December 3rd, 1910. The *post-mortem* examination was made on December 6th. The body was well nourished; neither the loin nor the anterior abdominal wall presented any scar externally. On opening the abdomen there was observed on the right side, and covered by the bowels, a large swelling. This was found to be the right kidney in its normal position. It weighed 11 oz.; the vessels were large and engorged with dark fluid blood; the ureter was slightly larger than normal. From a naked eye inspection the condition of the kidney appeared one of simple hyperplasia. On looking for the left kidney it was nowhere to be seen. There was a flatness of the posterior wall of the abdomen instead of the usual hollow. There were no left renal vessels, no left ureter, and no trace of embryonic remains. The left crus, quadratus, and psoas stood out with no vestige of organ or tissue where the kidney should have been; the left suprarenal was absent. The bladder was normal, but had only one ureteric orifice—namely, that on the right side. The uterus was lying well over towards the right side, with a normal broad ligament attached thereto. On the left side, however, there was a large space which the fist easily occupied. The broad ligament on this side was represented by a narrow fold dipping down deep into the pelvis and rising again, the left ovary being almost on a level with the brim. There were no abnormalities of vulva, vagina, or uterus. The woman had had two children, both of whom are living.

My best thanks are due to Mr. T. W. P. Lawrence, curator, University College Hospital, who, in the presence of two of the visiting staff, laid open the bladder and exposed the single ureteric orifice.

London J. MAUGHAN

[1] *Clinical Lectures on Important Symptoms*, Fasciculus II on Albuminuria, p. 107.

MIGRAINE AND ERRORS OF REFRACTION.

THE following case may interest, as emphasizing once again the fact that errors of refraction are frequently at the root of migraine and of the visual "zigzags and clouds" which occur in that complaint; also that the correction of the error of refraction will alone suffice to remedy.

On October 12th, 1910, Mrs. K., aged 30, married, four children, youngest 4 years, came to me complaining of migraine, and of seeing "zigzags" before her as she looked up. The headaches and "zigzags" were almost of daily occurrence. She was so impressed by their appearance that she had marked the hours in the days of the past week in which the "zigzags" had made their appearance. She had been suffering from migraine for two years past, and she had consulted an oculist about her eyes about that time ago, who found that she was suffering from granular lids, for which she was treated. The following correction was also ordered, but had not been worn, as she said that the glasses blurred her vision:

R.	L.
+ 0.25	+ 0.25
+ 0.5 ↙ 25°	+ 0.5 ↙ 30°

Under H and C her retinoscopy was:

R.	L.
+ 0.25	− 0.25
× Em.	+ + 0.75
With lenses ... ... = ⅔	= ⅔
+ 0.25	− 0.5
+ 0.25 ↙ 40°	+ 1.25 ↓ 105°
Ordered.	
+ 0.25 ↙ 40°	− 0.25
	+ 1 ↓ 105°

On November 10th she came to me after having worn her glasses for about a month. She was delighted that she had not had a headache or seen a "zigzag," although she had had "washing mornings," which always produced both phenomena. I may add the headaches were always worse on the left side of the head, the left eye being the seat of most error of refraction.

Streatham, S.W. A. G. CLARKE POCOCK.

KALA-AZAR IN MALTA.

I WILL be glad if you will kindly find a space for this communication on a subject which is attracting great attention just now.

Girl, aged 3, ill for seven months, great pallor of skin and mucous membranes; moderate emaciation; fever of a remittent type; no oedema; accessible lymphatic glands very slightly enlarged; no petechiae; spleen can be palpated as a distinct movable, painless tumour reaching down to level of umbilicus; liver does not reach below costal border; bronchial catarrh; diarrhoea of a dysenteric type, tenesmus and mucus slightly tinged with blood.

Diagnosis.—Infantile kala-azar, confirmed by microscopical examination of the splenic tissue.

The important feature of this case is the demonstration of Leishman-Donovan bodies in smears from mucous flakes excreted with the faeces.

I believe this is the first time that the examination of excreta of patients suffering from leishmaniosis has been attended with positive results as regards the demonstration of the pathogenic protozoa. The smears were stained by the Giemsa method in the usual way.

I hope this discovery will help to throw a little light on the, as yet, very obscure etiology of the disease. It certainly is something to go by in recommending prophylactic measures.

Malta. A. CRETIEN, M.D., D.P.H., D.T.M.

A RAPIDLY-FATAL CASE OF SPLENO-MEDULLARY LEUCOCYTHAEMIA.

ACUTE cases of Hodgkin's disease are so decidedly rare that, when met with, it is distinctly desirable they should be placed on record, if only to remind us that such cases may be met with, therefore, I now send you some particulars of a case I recently saw, in consultation with Dr. James Johnson, under whose care the patient was.

Mrs. W., a widow, aged 34, young looking, but rather grey for her years, was very well and active in her occupation of housewife until October 2nd, 1910. So well was she that she said she "never felt better in her life," and it is a fact that between April and August she had gained a stone in weight, and it was about this time that she ran a race with her two younger sisters, both of whom she left behind.

Her widowhood had lasted six years, previous to which she had eleven years' experience of matrimony, which resulted in two children, a boy aged 8, and a girl aged 6. She was always healthy, excepting a little menstrual trouble. On October 2nd she had an influenzal cold, which kept her in bed a day or two. Every one else in the house also had a touch of it. She had never felt well since, and on October 29th she consulted Dr. Johnson. She said she "had not been away for her holiday, and felt thoroughly done up." She also complained of bruises (ecchymoses) about the legs, which she thought had been caused by the child kicking her in bed. She also complained of spots on the neck and upper chest. These were of a purpuric character. Her breathing was rapid, 32, and also her pulse, 120. The temperature was normal, and examination showed the heart and lungs to be quite healthy. Dr. Johnson prescribed a mixture of iron, strychnine, and arsenic, and advised rest. On October 31st he was sent for, and found her lying in an exhausted condition on the sofa, with acute pain in the left abdomen. He sent her to bed. On November 1st she was no better; always of rather a pale complexion, the pallor was more marked. The purpuric spots were larger, and also the bruises. She now, for the first time, complained of enlargement of the abdomen, and Dr. Johnson discovered a greatly enlarged spleen reaching below the umbilicus. One of her eyes was bloodshot, and blood was oozing from the gums. The temperature was not raised. On November 2nd the symptoms were much the same, but both eyes were bloodshot, and there was sickness, the stomach contents being slightly blood-stained; there was also slight epistaxis. On November 3rd the condition had not improved, and on November 4th I saw her in consultation with Dr. Johnson. She was in bed in a half-sitting posture. The face was pale and had an anxious, agitated expression. Respiration was rapid—of the breathless type. The pulse was fast and markedly dicrotous. The lips and teeth were covered with thick dark sordes of dried blood; the tongue, also, was dry and blood-stained. There were several purpuric spots about the root of the neck and the upper chest, and there were several ecchymoses on various parts. The bowels were open; the character of the stools not noted. The urine had been, all through, high-coloured and thick. The heart sounds were quite clear, and also the lung sounds to the extreme bases. There was no haemic murmur. The abdomen was considerably enlarged and hard.

This enlargement was greatly due to the spleen, which could easily be felt extending from under the left ribs and below the umbilicus almost to the right iliac region. The liver also was much enlarged and the edge greatly thickened. Both liver and spleen were very tender. There was no enlargement of the lymphatic glands. The axillary temperature was 102° F.

I could only confirm Dr. Johnson's diagnosis and emphasize his very unfavourable prognosis. On November 5th the respiratory distress was so great that oxygen was given for ten minutes every four hours with much relief. On November 6th she was no better. The sclerotic of both eyes was bright red. She was taking nothing but buttermilk, 2 to 4 pints daily. No material change took place in the symptoms till her death on November 12th. The temperature varied from normal to 101° F. during these last days. She was not the least emaciated, in fact, in very good condition. In addition, I am told, she began to menstruate on November 3rd, and this continued very copiously till her death. If we date the commencement of the attack from the influenza, the total duration of the illness was forty-one days.

A slight review of such medical literature as I possess has discovered records of cases fatal in twenty-seven days, twenty-one days, and even fourteen days, but most of the acute cases are said to be of the lymphatic type, not the spleno-medullary. I am much indebted to Dr. James Johnson of this town for permission to publish these

particulars, and also for the use of his notes of the case before and after I saw her.

Blackpool. WILLIAM HARDMAN.

BREECH PRESENTATION WITH PROLAPSED HAND.

I WAS called to see Mrs. W., a primipara aged 24, on November 21st, at 6 p.m. I found a certified midwife in attendance, who said she had been called to the case at 9.30 a.m. that day, when she found the patient in the first stage of labour, the membranes having ruptured forty-eight hours previously. On examining, she diagnosed a breech presentation with a hand prolapsed.

On arrival I found a breech in the second position, with the left hand prolapsed; the os was three parts dilated; the hand was pushed up on to the abdomen. Labour proceeded slowly with fairly good pains till the breech reached the perineum, when, after two hours and the pains losing power, delivery was effected with the blunt hook. The child was stillborn; the mother made a good recovery.

The main point of interest is that, in looking up the authorities, I find no mention made of a breech presentation being complicated with a prolapsed hand, this condition with a vertex being much more frequently met with.

H. WESSEN HUSBANDS, M.R.C.S., L.R.C.P.Lond.

Taunton.

Reports ON MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

GENERAL CIVIL HOSPITAL, COLOMBO.

A CASE OF PERFORATION IN ENTERIC FEVER, FOLLOWED BY ABSCESS FORMATION: OPERATION AND RECOVERY.

(Reported by LOUIS OBEYESEKERE, L.M.S. Ceylon, House-Physician.)

I AM indebted to Dr. E. Garvin Mack and Mr. A. M. De Silva for permission to report this case. The patient, a man aged about 30 years, was admitted on August 26th, 1910, in a low state, with a history of fever and cough of about ten days' duration and the bowels stated to be relaxed.

Condition on Admission.

His temperature was 103°; pulse 140, small and feeble. Examination showed consolidation at the apex of the left lung. The temperature ranged between 101° and 103° for the next four days, and his pulse improved in rate, volume, and tension. On August 29th his blood gave a positive Widal reaction.

Progress.

On August 31st his temperature rose to 104°, necessitating frequent spongings. The patient had now become unconscious—at first restless and delirious, and later in a state of stupor. From August 31st to September 4th the fever remained high with but slight morning remissions; the patient continued unconscious; the pulse retained its good qualities, and its rate ranged between 98 and 110 per minute. On the morning of September 5th—twentieth day of illness—the temperature dropped to 98°; the pulse now was 88, full and bounding; the upper part of the abdomen moved with respiration, but the area below the umbilicus was immobile and there was definite rigidity; the respirations were rapid—about 45 to the minute; the liver dullness was wholly obliterated; the general and mental condition of the patient was much worse; there was no vomiting.

Perforation.

The diagnosis of perforation was made, and the case was seen by a surgeon, who saw no indication for operation. By evening the temperature had again risen, and the patient's general condition seemed worse. The motions examined after this showed no signs of haemorrhage.

Result.

Next morning the respiration was still hurried, and the pulse was 120 and weak. There was bulging in both flanks, and the next day shifting dullness was obtained. Subsequently the patient made a good recovery, with the exception of a right-sided parotitis on the 11th, and a similar condition on the left side on the 16th, both of which subsided under suitable treatment.

Sequence.

Fourteen days after the patient was put back on solid food a tumour was noticed in the abdomen just below the umbilicus, and extending on each side to the outer border of the recti. When the patient was asked to sit up the lower part of the recti did not contract well, showing that there was involvement of these muscles in the tumour.

This tumour was about the size of an adult head, and was hard; deep fluctuation was obtained; the skin over the lower part was red and oedematous; there was tenderness on pressure. A catheter was passed and the tumour was thus proved to have no connexion with the bladder.

Under local anaesthesia a needle was put in and pus drawn off. An incision, 2 in. long, was then made at the outer border of the rectus, and the abscess opened and drained with drainage tubes. The pus was not faeculent. The posterior and the lateral walls of the abscess were composed of coils of small intestine matted together. The patient left hospital shortly afterwards fully recovered.

REMARKS.—It is noteworthy that the patient on no occasion after the perforation had any trouble with his bowels; that no pus was ever passed per rectum; that his temperature remained normal; that the pus in the abscess was not faecal; and that the patient never complained of any pain or discomfort from the presence of the tumour.

Reports of Societies.

ROYAL SOCIETY OF MEDICINE.

PATHOLOGICAL SECTION.

Tuesday, January 17th, 1911.

Dr. F. W. MOTT, F.R.S., President, in the Chair.

Insanity and Cholelithiasis.

DR. J. P. CANDLER concluded, from the study of a large number of statistics, that the incidence of gall stones was greater amongst the insane than the sane, as had been previously asserted by Mr. C. F. Beadles. Possibly the cholelithiasis was related to disintegration of the nervous matter which supplied cholesterin. He did not agree with certain previous writers in regarding cholelithiasis as a grave and frequent menace of carcinoma. Almost all cases of primary carcinoma of the gall bladder were associated with the presence of gall stones, so that there seemed a causal relationship between the conditions, although it was only in a relatively few cases that carcinoma supervened.

Protozoa in Yellow Fever.

Mr. SEIDELIN demonstrated the presence of minute protozoon-like bodies in the red blood cells of yellow fever. He had found them in nearly every case (Mexican), though not yet in the *Stegomyia*. They took the form of minute chromatin points, which subsequently acquired a small envelope of protoplasm. They might possibly be sufficiently minute to pass through a filter.

Complement Fixation.

Dr. H. R. DEAN described a series of experiments designed to differentiate the various members of the typhoid and paratyphoid group, and drew the following conclusions:

1. By the use of the complement-fixation method, *B. typhosus*, paratyphoid A, and paratyphoid B can be easily differentiated from one another; by the use of a suitable dilution of serum it is possible to differentiate paratyphoid B from *B. aertrycke*; this series of experiments entirely confirms the classification of Bainbridge. 2. The complement-fixation method affords an extremely delicate and specific means of differentiating between various members of the typhoid and paratyphoid group. 2. Very closely-allied organisms can only be differentiated after experiments sufficiently extensive to ensure a knowledge of the dilutions most suitable to the serum and extracts in use. 3. The group reaction and the degree of relationship between members of the group can be demonstrated by the use of various dilutions of an antiserum in the presence of extracts made from homologous and heterologous strains. 5. Under certain circumstances the degree of relationship can be seen during the course of an experiment by observing the time of onset of haemolysis in the tubes containing the various extracts. 6. The group antibodies can be removed from the serum by a suitably arranged absorption experiment. 7. Excess either of antiserum or of bacterial extract has an unfavourable influence on the fixation of complement. 8. The maximal fixation of complement is obtained when antigen and antibody are present in certain definite proportions.

Bacterial Gas-producing Power.

Dr. W. G. PENFOLD recounted an elaborate series of experiments, showing amongst other results that the colon bacillus could be educated to produce no gas.

Structure of Uric Acid Calculi.

Mr. S. G. SHATTOCK described some studies of uric acid calculi conducted by means of transparent sections. Some such calculi were cancellous, others compact in structure; this was an obvious macroscopic difference. and it was connected with a difference in the mode of crystallization. In the cancellous there was a nucleus of cuboidal crystals grouped in irregular trabeculae, and upon this a series of concentric arcades, with interspaces, built up of similar crystals, constituted the "body." In the case of the compact variety the structure was of cones of long crystals set radially to the centre; these might be marked with a series of proper concentric striae, and by coarser, less well defined zones of a finely crystalline material which might almost be named bacilliform, and which lay in the lateral interstices between the longer elements. This material was uric acid; for although in marked amount, the most careful chemical analysis of the calculi, in bulk, showed a complete absence of ammonium, sodium, or calcium. A comparison of the different elements with those met with in urinary sediments showed that whilst the cuboidal crystals of the cancellous variety could be matched, elongated forms were rare. The elongation of the crystals, and so the production of the compact variety, was attributable to a highly saturated condition of the urine. The length assumed by crystals in supersaturated solutions was well known. Miers had put forward the view that it arose from the diminished saturation of the fluid between the unopposed sides of adjacent crystals produced *ipso facto* by the crystallization, the extremities being free to grow at that end which lay in contact with the more highly saturated part of the solution, whilst growth in other directions was retarded. In a supersaturated solution, agitation produced a shower of crystals; the deposition of the finely crystalline uric acid in association with the tufts of long crystals in the calculi might be explained in the same way. In regard to the nuclei of uric acid (or other) calculi, although shed epithelium and mucus, etc., would always be available, their presence was not essential to start a concretion. In the cancellous kinds the nucleus was a chance aggregation of cuboidal crystals; and a very small collection of similar "rubble" at times formed the actual centre of a compact calculus, though in other cases a compact concretion arose as a radially disposed collection of longer forms, such as might appear in a supersaturated fluid at various independent points.

SECTION OF SURGERY.

January 10th and 18th, 1911.

RICKMAN J. GODLEE, President, in the Chair.

Cancer of the Rectum.

A DISCUSSION on the operative treatment of cancer of the rectum was opened on January 10th and completed on January 18th. Its introducer was Dr. WOOD JONES, who dealt with some anatomical points. Mr. SWINFORD EDWARDS entered a protest against the adoption of unduly severe operative methods. The immediate mortality was a consideration to be set against problematical increase of security as regards recurrence. The explanation of Mr. Miles's statistics of recurrence after perineal operation was probably that unsuitable cases were admitted. Growths fixed anteriorly or laterally were better left alone. He advised a preliminary colotomy in all extensive cases. Of 81 cases operated upon by him only 4 died and 22 recurred; 14 were not traced. In certain cases partial excisions were justifiable. The ideal operation, to his mind, was Bardenheuer's modification of Kraske's method. Mr. HARRISON CRIPPS endorsed Mr. Edwards's views. He considered only those cases fit for operation in which the growth was still confined to the bowel wall. A full account of his observations will be found at page 190 of this issue. Sir FREDERIC EVE said the Kraske type of operation was not entirely satisfactory. Cure could not be claimed on the three-year test. Many recurrences were much later than that, and the greatest security from such an event was obtained by permanent colostomy, combined with an abdomino-perineal operation. At the same time, the disease in the anal canal did not demand so extensive a procedure. Mr. WATERHOUSE strongly advocated the parasacral route. The more he tried the abdominal operation the less he liked it. The mortality was not less than 30 per cent. He emphasized the extreme importance of prolonged and detailed preliminary treatment, including colostomy if any degree of obstruction were present. Mr. BOYCE BARROW discussed the advantages of a preliminary colostomy and asserted that with proper attention the discomfort attending permanent colostomy was minimal. He had performed the extensive abdomino-perineal operation many years ago, and wished to point out the remarkable freedom from shock experienced after this long and arduous manipulation. Mr. HANDLEY made a spirited attack upon the standpoint of Mr. Edwards and Mr. Cripps, maintaining that clear pathological indications pointed to the removal of an extensive tract of bowel, even in cases where the growth itself was small. The mortality certainly was high, but he had been fortunate, for his last 3 cases—2 of whom were present—had all been successful. The permanent colostomy gave little if any trouble. He exhibited slides illustrating "permeation" of the submucous plexus, by cancer cells to a distance of 6 in. from the tumour. Mr. WALLIS laid stress upon the importance of early diagnosis and the necessity for rectal examination by general practitioners. He was becoming converted to the view that the abdomino-perineal operation was the right one in view of the pathology of cancer, but had had considerable success with the parasacral method. Mr. MUMMERY referred to Mr. Cripps's statement that only about 1 case in 4 of those seen by the surgeon was suited to operation. His own private records showed, amongst 100 cases, 57 already inoperable. The period elapsing between the first symptoms and inoperability was probably about nine months. In the sigmoidoscope there was an excellent means of accurate diagnosis in early stages. He strongly advocated re-establishment of the anal opening after the abdomino-perineal operation, believing it almost always possible, and eminently desirable. Ninety per cent. of operative mortality was attributable to sepsis. Mr. FAGGE had had so many recurrences after the Kraske operation that he resorted to the abdomino-perineal operation, and, despite the high immediate mortality, believed that this method saved more patients than any other. Mr. GORDON WATSON spoke from a personal experience of 10 cases of the abdomino-perineal method. Although he had not been able to confirm Handley's observations of "permeation," he believed this operation to be the correct surgical procedure. He raised the question of vaccines, especially anticoli vaccines, as a precautionary measure against peritonitis. Sir F. S. EVE and Mr. HANDLEY stated that they had employed antistreptococcic vaccines but not anticoli. Mr. SWINFORD EDWARDS, replying, said his position was that cases must be judged on their merits, and no more extensive operation performed than was essential to cure the patient. The PRESIDENT added his testimony to the advantage of colostomy, and also confirmed the observation as to absence of shock after the extensive abdomino-perineal operation.

UNITED SERVICES MEDICAL SOCIETY.

Wednesday, January 11th, 1911.

Colonel Sir DAVID BRUCE, F.R.S., in the Chair.

Training of Units.

CAPTAIN W. A. WOODSIDE, R.A.M.C., in a paper on the training of Territorial medical units, advocated that after the first year all privates should devote their chief attention to the special duty for which they were detailed in the duty roster, since there was not sufficient time to teach Territorial privates more than one set of duties. On the other hand, non-commissioned officers should have a general knowledge of all duties. It was very necessary that the adjutant should have a competent knowledge of horse management.

Infantry Loads.

Lieutenant-Colonel C. H. MELVILLE, R.A.M.C., in a paper on the load of the infantry soldier, showed that the weight at present carried in nearly all armies was too great, more especially since in war it would have to be carried from the start by reservists out of training. The limit of weight which could be carried without excessive strain was 22 kilos (48½ lb.), while the British soldier, who was quite lightly loaded compared with the soldier of most

other armies, carried 58½ lb. Arms, ammunition, and clothing accounted for 35 lb. of this, and could not well be reduced. Any reduction could only be made by lowering the weight of accoutrements, greatcoat, shelter appliances, and "necessaries." A saving of nearly 2½ lb. could be made by making the water-bottle and mess-tin of aluminium and the straps of thinner material. A great saving could be made by replacing the greatcoat (6¼ lb.) by a short pea-jacket and a pair of overalls, or by making the coat of lighter material. Of the "necessaries" (9 lb.), he would relegate the cup, the cutlery, and small book (total 400 grams), along with the pack (800 grams), to the second line transport. Clean shirts, towels, soap, and the like were luxuries on service, and expensive luxuries when they were carried at the expense of the fighting efficiency of the soldier.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

Friday, January 13th, 1911.

Dr. W. G. WILLOUGHBY, President, in the Chair.

Relation of Public Health to Industrial Diseases.

DR. DEARDEN, in a paper on the relation of public health to industrial diseases, claimed that understanding and amelioration of any conditions attached to associated labour which tend towards deterioration of physique and creation of disease must of necessity form a well-defined and distinct part of general hygiene. Apart from the excessive mortality from certain diseases which could be attributed to particular trade processes, alcoholism appeared to pick out certain trades in the exercise of its deleterious effects. The alcoholic tendency of printers, hatters, and shoemakers was well known. Waterproof spreaders, who were subjected to naphtha fumes, were very rapidly affected by alcohol, and it was suicidal for workers in lead to indulge in the habit. The rapid breakdown through alcoholism of men engaged in arduous occupations was well illustrated in the iron and shipbuilding trades. Insufficient air space and bad ventilation had a distinct influence on the creation of lassitude in the worker through rendering the respired air impure. Apart from the fouling of the atmosphere by products of respiration and combustion, it was now pretty generally understood that the presence of an excess of carbonic acid was injurious, owing to the increased tension preventing the normal escape of the gas from the blood, as well as from the interference with oxygenation, both on account of this and the lowered tension of atmospheric oxygen. The factory system was one to a great extent of juvenile labour, and as the future of the race was now regarded as of great national importance, it became highly necessary to obviate any tendency to deterioration in physique or the sowing of seeds of disease as a consequence of conditions of employment. Although the age at which children and young persons were allowed to begin work was regulated by statute, the medical supervision of the certifying surgeon was a most prominent and important regulating factor of that form of labour.

Dr. BATE referred to the advantages of the conditional certificate of employment, which could now be given, as a great advance upon the former practice. He regretted the tendency of junior practitioners to certify workmen as suffering from lead poisoning upon insufficient grounds.

Dr. GLEN PARK advocated a more detailed examination of children seeking employment in factories, and considered that there was need for subsequent examinations after the first.

Dr. GREENWOOD and Dr. KEAY pressed for greater co-operation between the medical officer of health and the certifying factory surgeon.

Mr. F. E. FREMANTLE considered that the prevention of accidents was a part of public health work, and he would like to see courses of popular instruction for workmen in the prevention of accidents.

Dr. EDGAR COLLIS urged medical officers of health to take more interest in the conditions of employment in special diseases, and spoke of the importance of investigating the invalidity of special industries. He was of opinion that danger in occupation was indicated more by invalidity than by mortality.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.

Wednesday, January 4th, 1911.

Dr. C. H. CATTLE in the Chair.

Lumbar Puncture.

DR. C. H. CATTLE, in opening a discussion on lumbar puncture, described the cerebro-spinal fluid as a true secretion of the choroid plexuses of the lateral ventricles. In disease it showed an abnormal number of leucocytes and an increased amount of proteid. In acute meningeal affections the prevailing type of leucocyte was the polynuclear, but in tuberculous meningitis, syphilitic meningitis, tabes, and general paralysis, there was lymphocytosis. When destruction of nerve elements was in progress decomposition products, such as lipoid bodies and choline, could be detected, and also a great excess of globulin. The fluid gave the Wassermann reaction in a large percentage of cases of general paralysis, and also in tabes, but in lesser degree the cerebro-spinal fluid. Dr. W. T. ROWE said that in performing lumbar puncture on a child a general anaesthetic was advisable, and also in an adult who was delirious, but not otherwise. In all instances in which it was thought that meningitis might be present lumbar puncture should be performed; the presence or absence of meningitis could then be definitely determined; if the number of leucocytes was not increased, meningitis was certainly not present. In arriving at an opinion as to whether a case of sudden hemiplegia was due to (*a*) thrombosis or (*b*) haemorrhage, lumbar puncture was of service, for in the first event the cerebro-spinal fluid was not altered in colour, while in the second case it became "rusty." Valuable information might be gathered from the pressure under which the fluid escaped. Lumbar puncture relieved intracranial pressure, and, pending the action of antisyphilitic treatment, it might if repeatedly performed lessen loss of sight due to optic neuritis. For the drainage of toxins and bacteria it might be useful in cases of meningitis, and through the trocar Flexner's serum should be injected. It lessened the severity of convulsions in uraemia, and should be performed if free purgation, hot-air baths, etc., did not produce a beneficial effect.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

Friday, January 6th, 1911.

Dr. PHINEAS S. ABRAHAM, President, in the Chair.

Clinical Evening.

THE following were among the exhibits:—Dr. ABRAHAM: (1) A case of *Tylosis* treated with solid CO_2 and scraping; (2) mixed *Leprosy* in a male, treated with solid CO_2, with excellent results, the lepromata in the face having quite gone; the case was also treated with nastin. Dr. SEYMOUR TAYLOR: A case of typhoid fever with two relapses, one after an interval of five weeks. Mr. W. MCADAM ECCLES: A case of *Cystic swellings* on the forehead and in the thyroid region in a male, aged 65, that on the forehead being probably a dermoid cyst, and the thyroid one either a cyst of the thyroid or a tubular dermoid in connexion with the thyro-glossal tract. Dr. ARTHUR SAUNDERS: A case of *Tuberculous adenitis* in a girl aged 17. The case was of interest owing to the question of diagnosis between lymphadenoma and tuberculous glands. A gland was removed by Mr. Bidwell, and examination of it showed the presence of giant-cell systems typical of tubercle. Mr. N. BISHOP HARMAN: (1) A case of *Argyrosis of the conjunctiva* produced in a youth of 15 by the continuous use of protargol drops over several years; the case illustrated the importance of restricting the application of silver solutions to the hands of the surgeon only; (2) a case of *Tuberculous kerato-iritis* in a woman aged 21; the right eye presented three interstitial corneal masses, one of which was breaking down, and an acute iritis. Injections of tuberculin T.R. were made with most beneficial results. Dr. H. J. DAVIS: A case showing the stapes visible in the oval window in a woman of 25 in whom a radical mastoid operation had been performed for otorrhoea of three years' standing; the malleus and incus were removed; the bone cavity healed in six weeks; the patient could hear a watch

at 6 in. Dr. KENNETH ECKENSTEIN (for Dr. J. HALLS-DALLY) gave a demonstration of the sphygmo-oscillometer, an instrument devised by Dr. Pachon of Paris to estimate the blood pressure. The advantages claimed for the instrument were: (1) that the personal equation was abolished, (2) that the blood pressure was measured at the same level as the compression, and (3) that the instrument was always working at a constant pressure. It showed the maximal or systolic pressure, the minimal or diastolic pressure, the amplitude of the pulse, and the characters of the pulse wave — such as dicrotism, irregularity, effects of respiration, etc.

BATH CLINICAL SOCIETY.

Friday, January 6th, 1911.

Mr. F. LACE, President, in the Chair.

Exhibits.

THE exhibits included the following: Mr. A. J. B. LECKIE: A case of *Primary carcinoma* of the liver in a girl, aged 6, since confirmed *post mortem* (weight of liver, 87 oz.). Mr. FORBES FRASER: An ovarian dermoid, which had ruptured into the peritoneum, being attached to the sigmoid flexure by a patent tube about an inch and a half in length. The cyst contained foul-smelling faecal material and vegetable débris, the remains of fruit skins, seeds, orange pips, etc., being recognized.

Cancer Problem.

Dr. CHARLES J. WHITBY, in a paper on the cancer problem in the light of recent research, said that the fact that cancer occurred in civilized and uncivilized races of mankind, showed that dietetic and other habits were of secondary importance. Ethnological researches also confirmed the belief in the rôle of chronic irritation as a predisposing cause. In inoculation experiments the histological peculiarities of the original tumour were often reproduced by astounding fidelity through many "generations." There was a marked tendency to alternation of periods of rapid growth and multiplication with periods of comparative sterility. The fibrous and vascular stroma of a transplanted growth was derived from the host, and represented a specific reaction to the presence of the parenchyma cells; according as the fibrous or vascular element predominated the cancer cells would be ill or well nourished. In immunized animals no stroma formation succeeded the inoculation of cancer tissue, consequently the cancer cells died. At any stage in a given series of transplantations the connective tissue elements of the stroma might undergo transmutation into spindle-cell sarcoma, and would then become transplantable. The sarcomatous stroma competed with the original carcinoma, and might in the course of further transplantations oust it altogether. The results of research confirmed the rationality of treatment by radium and the *x* rays. It would be premature to apply the results of experimental immunization to man until such time as definite effects could be produced in animals upon growing vascularized tumours of spontaneous origin as distinguished from recently introduced transplanted growths.

THE essential object of the Boy Scouts' organization is, apparently, to make boys into good citizens—physically strong, self-reliant, resourceful, and with some appreciation of duty to their fellow-creatures and to their country. This is an ideal well worth striving for. A glance through some of the numbers of the *Boy Scouts'* (*Baden-Powell's*) *Headquarters Gazette*, which is the official journal for all secretaries and scout masters, shows how wide a range of subjects can be utilized in the teaching of citizenship. In the issue for December, 1910, scout masters are reminded that the extent of the scouts' organization makes it a power which can be utilized for the national welfare, and suggests that this power may be usefully employed in aiding the campaign against tuberculosis. Sir R. Baden-Powell gives a short account of the main facts about consumption, its causes, and the extent of the disease, and then indicates the part which the boys can take in the work of prevention. Sir R. Baden-Powell has done well in recommending this subject to the consideration of the scout masters, for through them much may be done towards the hygienic education of the younger generation which should bear good fruit in a few years' time.

Rebiews.

ALLBUTT AND ROLLESTON'S "SYSTEM."

VOL. VIII of the *System of Medicine*,[1] edited by Sir CLIFFORD ALLBUTT and Dr. ROLLESTON, differs from the corresponding volume of the first edition in that it is devoted entirely to diseases of the brain and mental diseases, diseases of the skin, formerly incorporated in vol. viii, being reserved for the concluding volume. New articles have been contributed by Dr. F. E. Batten, Professor J. Michell Clarke, Dr. James Collier, and Dr. Head, whilst the whole bears constant witness to the thorough and careful revision demanded by a department of medicine the progress of which, by the expansion of its confines, the development of its resources and changing terminology and conceptions, is unsurpassed by that of any other. Of its thirty-seven contributors each is an authority upon the subject on which he writes, and doubtless it is for this reason that although no new discovery is overlooked and no new and important point of view left unmentioned, a wise and judicial conservatism is throughout clearly discernible. For this reason it seems safe to prophesy that future editions may, and will, call for additions but not for alterations.

Varying naturally in accord with the subject as to length and individual method of treatment, the separate articles are at one in their animating spirit of thoroughness, lucidity of utterance, and discriminating judgement. After an appropriate opening article by Dr. Leonard Hill on the experimental pathology of the cerebral circulation, Sir David Ferrier discusses the regional diagnosis of cerebral disease. Considering the range of this subject, its enormous literature and the wealth of experimental research, in which the author has borne so distinguished a part, this article is a model of compression. Following the account of disease of each region, a useful summary of the main conclusions to be drawn therefrom and an extensive bibliography of each region are given.

Preceding the chapter on tuberculous meningitis by Sir Thomas Barlow, a new article is contributed by Dr. Batten on all forms of meningitis except the tuberculous, use being made of the statistics and illustrations given in Dr. Lees's and Sir Thomas Barlow's elaborate article on simple meningitis in the first edition. Turning to diseases of the brain proper, Sir William Bennett gives a most interesting and useful account of some milder forms of concussion of the brain. The importance of this article lies in the fact, to which the author draws attention, "that even now medical men are not always alive to the importance of these symptoms, or to the relation which they bear to an injury which may have appeared to be trivial." In these days, when the etiological significance of head trauma, not followed by pronounced loss of consciousness, is becoming discounted as a cause of mental illness, the opinions of, and safeguards suggested by, Sir William Bennett, are worthy of especial note.

In reviewing a work of this magnitude any attempt to mention every article would resolve itself into a mere catalogue of subjects and authors, but on account of the prevalence of these affections special mention should be made of the articles on general paralysis by Drs. Savage and Goodall; on epilepsy by Sir William Gowers; on chorea, tetany, tics, facial spasms, head-nodding, paramyoclonus multiplex, and eclampsia nutans by Dr. Risien Russell, and that on neurasthenia by Sir Clifford Allbutt. The group of admirable articles by Dr. Risien Russell deals with widely-prevalent but obscure and, until recently, ill-defined affections, clear conceptions of whose nature and differential diagnosis has accrued largely from the work of Continental observers. Every one who reads these articles will be grateful for his excellent and absolutely up-to-date exposition. The article on neurasthenia takes up 63 pages, but no one will be disposed to quarrel with its length; combining philosophic breadth of view with scientific precision, coupling the formulae of the laboratory by the sure hand of one

[1] *A System of Medicine.* By Many Writers. Edited by Sir Clifford Allbutt, K.C.B., M.D., LL.D., D.Sc., F.R.C.P., F.R.S., F.L.S., F.S.A., Regius Professor of Physic, University of Cambridge, etc.; and Humphry Davy Rolleston, M.A., M.D., F.R.C.P., Senior Physician, St. George's Hospital. Vol. viii: *Diseases of the Brain and Mental Diseases.* Second edition. London: Macmillan. 1910. Illustrated. (Med. 8vo, pp. 1084. 25s.)

skilled in verbal artistry, and the whole as genial and humane as it is scholarly, Sir Clifford Allbutt's article is as instructive as it is delightful to read. Leaving with a bare mention two brief monographs on the disorders of sleep and night terrors by Drs. Bradbury and Leonard Guthrie, respectively, we pass to mental diseases, the concluding portion of the volume.

The introduction, outlining the classification recommended by the Medico-Psychological Association of Great Britain and discussing succinctly the usually assigned causes of insanity, is by Dr. Savage. Then follows an article on vice, crime, and insanity by Dr. Mercier, distinguished by the dialectical skill and power of expression characteristic of the author of *Criminal Responsibility*. Drs. Shuttleworth and Fletcher Beach write on idiocy and imbecility, and the articles on mania, toxic insanities, and mental stupor and catalepsy are by Dr. Savage. The epochal insanities are described by Dr. Clouston, and here it should be said that the distinguished author, although bracketing dementia præcox with his classification of the insanity of puberty and adolescence, gives no recognizable description of dementia præcox and its forms as depicted by Continental observers. Similarly, melancholia as described by Dr. Rayner is to be regarded as including all mental disorders in which emotional depression is the predominant system, and not in the restricted fashion of the simple melancholia of involution. An admirable account of systematized delusional insanity by the late Dr. Conolly Norman receives a critical addendum by Dr. Percy Smith, who also describes acute delirium. Other articles are written by Drs. Hyslop, Dr. Robert Jones, and Dr. Urquhart, while Dr. Milne Bramwell gives a very brief and practical account of hypnotic practice and results. Finally, criminal lunacy in England is treated by Dr. David Nicolson, while English law and practice of lunacy has been given into the safe hands of Drs. Savage and Outterson Wood.

Although mental diseases take up less than a fourth of the whole volume, this portion will be found quite adequate for the needs of the student and general practitioner.

COMPARATIVE PHYSIOLOGY.

WE have received the first nine parts of an important German work on comparative physiology,[2] which Professor WINTERSTEIN is editing. His contributors include an accomplished set of men who are familiar with one or other branch of their subject. The first part of the second volume, on the digestion and assimilation of food, is dealt with by Professor Biedermann, a most prolific writer. He has completed five instalments, and these contain nearly 1,000 pages, and he is still hard at it. Professor Tigerstedt deals with heat production, and Professor Garten with animal electricity. To Professor L. Fredericq has been allotted the secretion of protective and useful substances, while Professor Burian has produced the first instalment of his work on excretion, and Professor Mangold that on the production of light.

Just as comparative anatomy and embryology has thrown much light on the development and evolution of man and the genesis of abnormalities, so the study of comparative physiology leads to the better understanding of function. In itself the subject is one of entrancing interest. We read of the wonderful production of light by the deep-sea fishes, the dark abysses of the sea miles deep, illuminated by the ghostly flitting forms of a fauna that feeds, in the absence of all flora, on the débris that comes from above; of the light organ taken from fish which illuminate the coral reefs of the Malay Archipelago, a light organ which is used as a bait, and gives light the whole night through, although excised from the fish. This light organ is a modified skin gland, and has behind it a reflector of connective tissue cells filled with doubly refracting crystals (guanin?). It is provided with a big nerve supply from the trigeminal-facial complex. The light is cold, no energy is wasted on heat production, and the living protoplasm arrives as in every case at an economy of production which man cannot emulate, and a mystery of energy transformation which defies his understanding. The *Noctilirca miliaris*, the rhyzopod which produces the ordinary phosphorescence of the sea, measures only some $\frac{1}{4}$ mm., and there may be as many as sixty in every quarter of a pint of water. Under the microscope its body looks like the starry firmament, as points of light flash up and out all over the surface.

Professor Biedermann tells us of the wonderful fungus garden made by ants. The soil is prepared by the chewing up of leaves, and a bed is formed sometimes yards in extent. The spores of moulds settle on this, and then, most wonderful of all, the ants manure their garden. An instantaneous photograph is given showing an ant applying the filament of mould to his anus, and then, after dunging on it, planting it again in the garden. We learn how the snail's liver is not only, as in us, a great storehouse of fat and glycogen, but also of calcium phosphate, which he uses to build his shell. We see a picture of a section of a potato stem before and after digestion by the stomach juice of the snail, and note how only the wood fibres are left. In dealing with the digestive organs of insects, Professor Biedermann tells us all that is known of the wonderful functions of the salivary glands of bees, the production of comb and honey, the feeding of the workers, and the queen larvae.

Professor Garten's account of the electric fishes is full of interest, illustrated as it is with figures of the fish and their electric organs. No less so is Professor Fredericq's account of all the defensive mechanism, the poisons of stinging animals, the toxin and antitoxin of poisonous snakes, etc.

As a work of reference this is one which every biological laboratory and library should have on the shelves.

BIOLOGY.

UNDER the title of *Charles Darwin and the Origin of Species*,[3] Professor E. B. POULTON has reproduced in one volume a collection of addresses delivered in America, in Oxford, and in Cambridge in connexion with the Darwin celebrations and the jubilee of the publication of the *Origin of Species*. To these are added an essay on the "Value of Colour in the Struggle for Life," which originally appeared as Essay XV in *Darwin and Modern Science*, published by the Cambridge University Press in 1909. A new chapter on "Letters from Charles Darwin to Roland Trimen (1863–71)," and four chapters styled "Appendices" complete the volume. Naturally a book of this character, dealing with a variety of topics, is of unequal interest; some chapters will appeal to those whose interests turn more towards the biographical side, other chapters to those fascinated by the philosophical speculations of the great naturalist.

In considering the book as a whole, it may be reviewed from this double standpoint. In the biographical portion Professor Poulton has been able to add little that is new. The material is largely culled from *Life and Letters* and *More Letters*—books already familiar to nearly every one. The chapter on the "Personality of Charles Darwin" is delightful. One never seems to tire of reading accounts of the life and personality of that most lovable of men, especially when written by a pen so sympathetic as that of Professor Poulton. On one occasion only does Darwin seem to have given vent to a harsh saying about any one. It was during a conversation with Mr. Roland Trimen relative to the authorship of certain hostile articles in the *Quarterly Review* and the *Edinburgh Review*. Darwin asked if Trimen knew who wrote the articles. On being told that Owen's name had been suggested, Darwin said, "Owen was the man." On being questioned as to whether he knew it to be the fact or came to that conclusion from internal evidence, he replied, "The internal evidence made me almost sure that only Owen could have written it; but when I taxed him with the authorship and he absolutely denied it—then I was quite certain." Words from so "eminently gentle and considerate" a man showed a very considerable depth of feeling, and naturally made a deep impression upon the hearer. Professor Poulton is indebted to Mr. Trimen himself for the account of this episode, which, we believe, is here published for the first time. It is, however, in the chapters which deal with such

[2] *Handbuch der Vergleichenden Physiologie*. Edited by Professor Winterstein. First nine parts. To be completed in about thirty parts. Jena: Gustav Fischer. 1910. (Sup. roy. 8vo. M.5 each part.)

[3] *Charles Darwin and the Origin of Species*. By E. B. Poulton, D.Sc., M.A., Hope Professor of Zoology in the University of Oxford. London: Longmans, Green and Co. 1909. (Med. 8vo, pp. 318. 7s. 6d.)

subjects as mimicry in butterflies, warning colorations, cryptic colours, and the like, that the author is, perhaps, at his best. They are subjects of which he has made a lifelong study and upon which he is a recognized authority. Rival theories are admirably stated and explained in such a way as to be "understanded of the people." The facts and theories discussed are matters of considerable interest to the general reader as well as to the professed biologist. Professor Poulton has some hard sayings with regard to the views of De Vries and the Mutationists, "with whom the Mendelians are somewhat unnecessarily allied." A strong supporter of Weismann, he does not believe in the inheritance of acquired characters, though we hardly think that the example which he has selected in support of his contention, and which he discusses at some length —namely, the evolution of the feelings experienced on entering a tropical forest for the first time, or upon entering a vast cathedral—is a very happy one. Though Professor Poulton's views upon many of these philosophical problems do not commend themselves to all biologists, he has nevertheless written an interesting book, and one which will appeal to a considerable section of the reading public interested in general biological problems.

The historical and critical study of "system" in biology,[4] which we owe to Dr. TSCHULOK of Zurich, is a formidable monograph, which would probably receive more attention, and therefore better achieve its purpose, were it much more condensed. His appeal should receive much sympathy from medical teachers. In a historical survey he contends that botany actually suffered from being a handmaid of medicine, since the textbooks upon the subject were merely herbals to which glossaries of prodigious size were attached. This still persists in numerous standard textbooks with their chaotic chapters on "special botany." Zoology was in a much more favourable position, for the physicians who taught it examined animals with the object of obtaining information which would elucidate the problems of medicine. After a preliminary division of all biological methods into *biophysik* and *biotaxis* (study of real relations and ideal relations respectively), the author proceeds to enumerate seven "points of view" from which biology should be studied. These are (1) *Systematology* or classification—the division of organisms into groups according to their similarity; (2) the laws of form, or *morphology;* (3) the living processes in the organism, or *physiology;* (4) the relations of organisms to the outer world, including other organisms, or *ekology*—this branch of the science is often termed biology; (5) the distribution of organisms in space, or *chorology;* (6) their distribution in time or *chronology;* and, finally (7) the origin of life, or *genetik*. After a very able plea for this classification the author proceeds to criticize other proposed classifications, including Spencer's and Pearson's. Perhaps the most interesting part of the book is the criticism of the modern textbooks as illustrating the prevailing methods of teaching. It is pointed out that more space and dignity should be given to ekology, chorology, and chronology, which are usually relegated to a few paragraphs and chapters. When one remembers that most of the triumphs of modern tropical medicine are essentially within the limits of ekology, the importance of this projected reform becomes evident. It is probable, indeed, that if a great deal of parasitology were "unloaded" into biology the student would take more interest in the subject and would have his later years more free for the study of clinical medicine and surgery. With regard to chorology and chronology, it is surely remarkable that, notwithstanding the immense importance of these subjects in regard to evolution, their treatment in ordinary textbooks is still very inadequate. There can be little doubt that the comparative neglect of these aspects of biology deprive the science of much of its value as an intellectual discipline. Dr. Tschulok admits the necessity of a division into general and special botany and zoology, but only for the purpose of teaching. He would have the section of special botany consist of a description of a few types carefully selected to demonstrate the general laws in all the branches of biology enumerated above. It would consist, in fact, of a series of chapters modelled more or less on the lines of Huxley's *Crayfish*. Thanks largely to Huxley, this system has been practised to a great extent in this country, but in Germany, if the textbooks are any criterion, special botany and zoology consist largely of undigested catalogues of orders and species. Strassburgher's well-known textbook of botany is criticized very severely. Dr. Tschulok shows that the section on special botany in this (and in similar textbooks) is utterly devoid of logical method and contains an undigested and useless mass of ill-assorted facts. Those who have ever tried to struggle through this literary morass will cordially agree with the author. The book as a whole is written in a simple style, taking into consideration the rather complicated character of the reasoning, Dr. Tschulok has evidently a strongly logical mind and rapidly pounces upon any false reasoning. For instance, he draws attention to a prevailing fallacy which assumes that the demonstration of the similarity of precipitins in allied species is an "experimental proof" of the doctrine of evolution. It is merely the rather dramatic discovery of another similarity between the allied species. The mere fact that it can be demonstrated in a test-tube experiment does not give it any higher value than the scores of other similarities of form and function which have been recognized for many years. We feel sure that Dr. Tschulok's scheme for reform is based on sound lines. It is by no means so original as he supposes it to be, but there can be little doubt that reform is required even in England, where the energies of the medical student are apt to be expended on acquiring dexterity in the demonstration of the ovary of lumbricus rather than on getting a sound conception of general biological methods.

[4] *Das System der Biologie in Forschung und Lehre.* A historical and critical study. By Dr. S. Tschulok, Zurich. Jena: Gustav Fischer. 1910. (Roy. 8vo, pp. 420. M. 9.)

MEDICAL EDUCATION.

"THE subject of medical education in this country is not an easy one to follow, and my hope has been to deal with it so that any one interested can see what are the problems, and can estimate the practicability of the various solutions suggested for them." These words, taken from Dr. SQUIRE SPRIGGE'S preface to his volume entitled, *Some Considerations of Medical Education*,[5] serve admirably to explain the object at which he aims. A sort of pall has for the time fallen upon the subject of medical education, and more particularly over that part which has relationship to the University of London, the Royal Colleges of Physicians and Surgeons, and the London Medical Schools. It is well that this should be so, for after the strong feeling provoked in recent years, both in lay and medical minds, by the consideration of this subject in the metropolis, a pause will give time for the mud stirred up by the controversy to subside. As an aid to this precipitation abstention from controversy would, many think, be more than golden, while the affairs of the University of London are again going through the melting-pot of another Royal Commission. The Commission must, however, obtain evidence upon which it can base its report, and this volume will be helpful, for we doubt if the difficulties which assail the subject of medical education, whether in the United Kingdom or in London, have ever been brought within so reasonably small a compass, and yet have received such adequate consideration. The reader will find a good account of the medical curriculum, of its methods of standardization, of its merits, of the various schemes for the rearrangement of the curriculum, of the one-portal system, of the vexed question of the subjects which are ancillary to the study of disease, and of the requirements of the General Medical Council in regard to preliminary scientific education; finally, the author seeking a remedy for the malady which has fastened upon medical education, makes the following suggestion: "Attention henceforth will be centred more on the problems connected with these subjects (that is, the earlier ones), and it is probable that the position of the science masters in the public schools, who desire to begin the education of the medical student when he is in his sixteenth year, will receive greater attention than heretofore. This is a comparatively new point in the difficult question of medical

[5] *Some Considerations of Medical Education.* By S. Squire Sprigge. M.A., M.D.Cantab. London: Baillière, Tindall and Cox. 1910. (Cr. 8vo, pp. 108. 2s. 6d.)

education." On one or two points we feel we must cross swords with Dr. Sprigge; although, as he admits, "the matriculation of the University of London is harder than the examination which opens up the career of medicine at other centres," and although "far more application is required for the student to pass the matriculation examination at the University of London than is required to pass any other entrance examinations," he says on page 21, "It seems to be a general opinion that in too many instances the successful men at the London matriculation acquire habits of working which do not tend to make of them practical medical men." Later on Dr. Sprigge seems to imply that this depends a little on the way in which he has learnt his work—namely, by cramming. A graduate of the University of London is known to us who during his connexion with a London hospital had coached with men in nearly every subject in the medical curriculum, in order to add to his rather meagre financial resources. It was his experience that he never coached a single aspirant for the medical degree of the University of London; they did not want such help; on the other hand, he read with men preparing for the examination of the Conjoint Board and of the Universities of Oxford and Cambridge, and one of the most eager applicants for help was a Fellow of his college, who said he wanted some sort of coaching which would save him from wading through so much rubbish as he considered was to be found in the textbooks. Again, on page 63 Dr. Sprigge says, "In London to obtain that title (proper medical qualification) the student must do work that is not of the kind to enhance his utility as a practitioner." Now, if Dr. Squire Sprigge had put in the place of the word "London" the words "United Kingdom," there would be nothing to criticize; the remark, indeed, would be welcome. There is a large section of medical teachers who believe that the five years' medical curriculum is too long, in view of the rewards subsequent practice is likely to yield, and in view of the fact that the moment of qualification is not that happy one when a man becomes independent of financial help. We are all aware that to fit himself thoroughly for practice he must spend a year or more either as a resident in a hospital or working under the supervision of an experienced general practitioner. What is wanted, so it seems, is that the earlier subjects should no longer be allowed to monopolize three years of the curriculum. The farcical attention to anatomical details, and to the flotsam and jetsam of physiological theory which is being exacted from the medical student through two or even three years of his golden period of receptivity and educability is no credit to those responsible for the present state of affairs. Pathological and clinical work should receive more attention, and more of the earlier years should be devoted to applied biology—to bacteriology, for example. If these reforms were carried out, the student would be less dejected at the outset of his career as a practitioner, and less often wellnigh, if not actually, bankrupt.

Dr. Squire Sprigge has used the information which his position as Editor of the *Lancet* gives him in such a way as to earn for himself the lasting gratitude of those who wish to see the present unsatisfactory state of affairs amended. But the facts to which we have ventured to direct attention—though at first sight, perhaps, of minor importance—are not so in reality. They need to be elucidated by discussion, and on this score alone these essays were well worth writing and are as deserving of careful perusal. They provoke thought upon subjects which are of vital interest to the profession at large.

DISEASES OF CHILDREN.

THERE is now a large and increasing number of works on the hygiene and rearing of infants and children. Dr. DINGWALL FORDYCE'S book, *The Hygiene of Infancy and Childhood, and the Underlying Factors of Disease*,[6] differs from the majority of these, in that it is written exclusively for medical readers, and not for mothers and nurses. The author states that whilst there are to-day many first-class books dealing with the clinical and therapeutical aspects of disease in childhood, he knows of none professing "to correlate the primary facts of medicine as they apply specially to pediatrics." The book is interesting, and written largely on original lines. Throughout he shows his acquaintance with the latest developments of physiology, pathology, and bacteriology, and in addition he deals with the more modern aspects of heredity. The last, indeed, is a special feature of the work, and there are separate chapters on the factor of heredity, the problem of heredity, clinical aspects of heredity and environment. In addition, there is an appendix dealing with the study and theories of heredity. These chapters contain a succinct account of the main principles of the statistical and experimental systems. They are useful in themselves, but will prove still more so if they induce the readers to consult the original authorities upon whom the author has drawn for his information, and to whom he is rigidly scrupulous in acknowledging his indebtedness. There are many, however, who will be less hopeful in expecting practical assistance in clinical methods from further advances in the science of heredity than he would appear to be. At present clinical medicine owes little to any facts directly deduced from the study of heredity, whilst the latter is indebted in a large extent to clinical records of familial and similar complaints. The treatment of bacterial infections is especially good, and there is an appropriate chapter on the factor of age incidence. In the section on *Bacillus tuberculosis* the author states of cow's milk, "the danger latent in it from tuberculous infection is very real, it is quite preposterous to ignore it, and those who may order raw cow's milk for the infant or young child must do so in careless disregard of the possible consequences." There are many of large experience who attribute distinct and marked advantages to the use of raw milk over that which has been cooked in any form. Again, there are accepted authorities—including Emmett Holt and Comby—who regard the incurrence of tuberculosis from cow's milk as a very remote contingency. It may well be, then, that many, whilst fully recognizing its possible dangers, might deliberately order raw milk, putting its certain advantages for the many before the possibility of its disadvantage to the few. Again, considering how very real a danger of tuberculosis the author attributes to the use of raw milk, his method of counteracting this danger appears inadequate. He writes, "To this end *cow's milk for the use of young children (unless obtained from an exceptionally reliable source) must always be scalded.* The italics are his. Few, we take it, regarding this danger so "very real" as the author does, would care to rely on mere scalding. This is almost the only point we have noticed calling for adverse criticism throughout the work. It is offered to "busy practitioners" and "young physicians," but of the former class, we fear, it will only appeal to a limited number, much of the matter being of more academic interest than of direct practical utility. The author writes fluently and well, and his book makes pleasant reading. It is worthy of a better paper and general get-up.

We have so often expressed our appreciation of the work of Drs. GOODHART and STILL on *The Diseases of Children*[7] that any lengthy notice of the ninth edition would be redundant. In its latest form the work has been thoroughly revised; effete information has been removed, and new material added, thus bringing it thoroughly up to date. An innovation, and a pleasing one, is the inclusion of illustrations in the text. These are few in number, but each one is well adapted to the purpose for which it is inserted. Criticism, needless to say, is superfluous. It might have been well, perhaps, in the brief section on erythema nodosum to have mentioned the view, now held by many, that the complaint is a distinct and specific one, having no causal connexion with rheumatism. In the preface Dr. Goodhart notices a criticism we passed in a review of a former edition, that the mixed usage of "I" and "we" might be somewhat disconcerting to those reading the book for the first time. We imagined we had made it abundantly clear that we recognized that this was inseparable from the evolution of the work, and due to the

[6] *The Hygiene of Infancy and Childhood, and the Underlying Factors of Disease.* By A. Dingwall Fordyce, M.D., F.R.C.P.Edin., Extra Physician, Royal Hospital for Sick Children, Edinburgh. Edinburgh: E. and S. Livingstone. 1910. (Demy 8vo, pp. 300. 6s.)

[7] *The Diseases of Children.* By James Frederic Goodhart, M.D., F.R.C.P., Consulting Physician to the Evelina Hospital for Sick Children, and to Guy's Hospital, etc.; and George Frederic Still, M.D., F.R.C.P., Professor of Diseases of Children, King's College, London; Physician to Out-patients, the Hospital for Sick Children, Great Ormond Street. Ninth edition. London: J. and A. Churchill. 1910. (Med. 8vo, pp. 947. 15s.)

original offspring of Dr. Goodhart having been stepfathered by Dr. Still. If we did not say then, we will say now, that any change interfering with Dr. Goodhart's happy phraseology would be one to be deplored, and one that would materially detract from the pleasure with which the work may be read. The new binding and get-up of the book are distinct improvements upon those of former editions.

The fact of Dr. KOPLIK'S work on *Diseases of Infancy and Childhood*[8] having reached a third edition is a proof that its merits have not gone unrecognized. In this edition many chapters have been revised and recast, and fresh sections have been added on such subjects as idiocy and dwarfism. In spite of this revision and additions, the book remains an uneven one. Whilst many of the complaints are adequately dealt with, in the case of numerous others the description is scanty and incomplete. More especially is the last the case in those parts of the book dealing with the more clinical aspects of the diseases. The volume is a large one, but the symptoms of many important complaints are dismissed in very few lines. The section on nutrition and infant feeding is adequate and satisfactory. Dr. Koplik is no believer in the elaborate percentage methods of Rotch, and sums up their defects as follows:

1. By simply rearranging the proteids, fat, and sugars, we do not change the proportionate relationship which the casein or caseinogen bears to the lactalbumin and other proteids of the milk, and we do not in any way change the foreign nature of these to the human economy.
2. With the exception of a few limited facts and formulae, we have no data which, with our present knowledge, will enable us to know in every case when to increase or to diminish the proteids and also the fats.
3. The process of separating the cream from the milk by machinery destroys the original delicacy of the fat-emulsion in the milk. The infant does not assimilate these mixtures in every case as well as those which are constructed from milk which has not been manipulated to the extent that laboratory milk has.

With these conclusions most later authorities will agree. The author's statement that "It is fallacious to assume that the proteids and fats of cow's milk can be assimilated without change in the economy," refers to an odd theory, undoubtedly fallacious, and, as we had supposed, forgotten. In many places in the work we notice an unnecessary elaboration of forms of diseases, founded merely on the predominance of one or other set of symptoms. In the section on anterior poliomyelitis, for example, he describes no less than six "distinct forms": (1) "The poliomyelitic or spinal form"; (2) "The form simulating an acute or descending paralysis (Landry's paralysis)"; (3) "The bulbar or pontine form"; (4) "The encephalitic or cerebral form"; (5) "The polyneuritic form"; (6) "Abortive forms." In addition, he mentions an "ataxic form" of other writers, but merely to say that it is rare. We cannot think the separate description of each of these as "distinct" forms either necessary or advisable. By a curious coincidence, too, with all his numerous forms he does not mention the one that is really distinctive—the one of limited distribution in the younger children—that sets in suddenly without pyrexia or any other obvious disturbance of the general health. Pneumococcal peritonitis occupies only a single page, and the description is meagre and inadequate. In one place we read: "And in this way we have a picture resembling ascites or tuberculosis of the peritoneum," and a few lines lower down it is stated, "Tuberculosis of the peritoneum can hardly be mistaken for this form of peritonitis"—statements that are apparently contradictory of one another. With regard to the latter, we are inclined to agree with Annaud and Bowen that mistakes between the complaint and tuberculous peritonitis have not been infrequent. Few observers, too, in this country at least, would agree that "The prognosis, as a rule, is good"—for the mortality here has been deplorably high. The section on pyloric stenosis in infants can be commended; the author's conception of its pathology is reasonable, and one that is consistent with the widely different views held by different authorities, both as to the complaint and its treatment.

An excellent feature of Dr. Koplik's work is the wealth of illustrations, both coloured and plain, most of which are admirable and well selected to assist the text.

[8] *The Diseases of Infancy and Childhood.* By Henry Koplik, M.D. Third edition, revised and enlarged. London: Henry Kimpton 1910. (Roy. 8vo, pp. 959; engravings 204, plates 39. 25s.)

ALCOHOL AND DEGENERACY.

DR. J. JOHNSTON of Bolton discusses in his *First "Hicks" Counties Lecture*[9] the subject of "Alcohol, the Parent, and the Child." First referring to alcoholism as one of the most potent factors concerned in infantile mortality (in support of which he quotes Dr. Sullivan's well-known prison statistics as to drunken mothers and their offspring), he goes on to point out how alcohol lowers the vitality of the phagocytes and consequently the power of resistance to disease. The question as to the part which parental alcoholism plays as a factor of feeble-mindedness is discussed, and Dr. Johnston considers the balance of evidence is in favour of the views of Drs. Potts, Wiglesworth, Tredgold, MacNicholl, and others, who conclude that, though the origin of mental defect is complex, parental alcoholism exerts a potent influence in causing mental degeneracy of offspring. He agrees with Forel that alcohol is a "protoplasmic poison," producing "blastophthoria," and affecting the germ-plasm out of which the embryo of the new individual is formed. He confirms also from his own experience the observations of Bunge of Basle, that a mother's disability to suckle her children may arise from her father's intemperance. Oddly enough, he does not refer to maternal alcoholism as a direct cause of impaired development of the embryo. Examining Miss Elderton's memoir, he questions the value of the material on which the conclusions are based, pointing out various fallacies and weaknesses. Lastly, he emphasizes the importance of the protection of childhood from alcohol as the best way of protecting parenthood from it, and strongly advocates "temperance teaching" in all schools.

A FRENCH VIEW OF MEDICAL ETHICS.

THIS translation of the second French edition of Dr. GEORGE SURBLED'S book on *Medical Etiquette*[10] is introduced to the English reader by Sir Dyce Duckworth, who "is not aware of any such work having been produced in this country, certainly in recent years," and feels "sure that such teaching is most necessary and important for young practitioners at the outset of their career." In thus ignoring Professor Saundby's well-known book, which is in its second edition, Sir Dyce Duckworth has committed an unintentional injustice. Dr. Surbled is Lecturer on Deontology at the Post-Graduate School inaugurated in 1908 under the auspices of the Catholic Institution of Paris, and writes from the standpoint of that Church. His views are coloured by national, political, and religious prejudice, as shown by his caustic references to Koch's tuberculin, wherein he ignores its merit, and by his remarks on the Revolution and the production of premature labour. He divides his subject into six parts; in the first he discusses the principles of medical ethics and finds them in "Honour, Conscience, and Religion"; but like that other formula, "Liberté, Egalité, et Fraternité," these fine words carry us a very little way in practice. In the second part he enumerates the medical virtues as Justice, Charity, Self-sacrifice, Courage, Patience, Self-denial, Discretion, Dignity, Honesty, and Knowledge. Under Honesty he says truly that the doctor should "hold the balance justly and adhere strictly to the truth in his dealings with patients," but he adds, "In practice it is always *useful* (the italics are our own) to take a rather despondent view, especially in doubtful cases: then if death ensues we have prepared the family for it, while if the case terminates favourably we shall obtain more or less credit for it; we are not forbidden to be clever or to take advantage of circumstances." Is this teaching any better than that of the cynic who said that it always paid best to give a good prognosis? Under the same heading he approves of the State rewards given to Jenner and Pasteur for their discoveries, but adds, "Why did not Branly receive one?" Who is Branly that he

[9] Published under the direction of the Hicks Counties Lecture Fund Committee by the Onward Publishing Office, Limited, Manchester.

[10] *Medical Etiquette (Handbook of Elementary Deontology).* By Dr. George Surbled. Translated from the second French edition by W. P. Grant, M.Sc., M.B., Ch.B., M.R.C.S., L.R.C.P. With a preface by Sir Dyce Duckworth, Bart., M.D., LL.D. London: Sherratt and Hughes. 1910. (Post 8vo, pp. 280. 5s.)

should be placed on the same level with Jenner and Pasteur? We confess the name is unknown to us. Practices which we think unworthy of the dignity of the medical profession are condoned by the author, such as the custom of doctors receiving "three francs for finding a place for a nurse"; he "does not think the doctor should be blamed," and considers "just and lawful the small reward that is given in these cases!" He excuses the doctor who "sends his patients to buy a pessary or special bandage from a reliable shop which grants him a small allowance," and those who take shares or debentures in companies which own establishments at spas or winter resorts where they send their patients; he fails to see that taking commissions or being interested in these companies must lead to the corruption he elsewhere deplores. The third part of the book deals with the mutual relations of doctors, but his rules do not always accord with our notions of propriety, as when he sees no harm "in a brief newspaper notice of the arrival of a new doctor." Nor are the doctors' grievances the same as ours, when he complains of the existence of official medical experts who are alone recognized by the courts of law. On the thorny subject of supersession he is vague, and does not make it clear that the superseding doctor before taking charge of the case should know that his predecessor has been told that his services are no longer required.

On the whole the impression conveyed by the book is by no means complimentary to the medical profession in France; it would seem as though the only restraining authority is the penal code, and that if the medical practitioner does not come in conflict with the police he escapes all penalty, however much his conduct may violate honour, conscience, and religion. Dichotomy, or the system by which the consultant pays a part of his fees to the consulting practitioner, is a blot on the fair fame of the French medical profession, but seems to be practically universal. Dr. Surbled's chapter on operations is a severe indictment of the methods of French surgeons who are charged with "lack of judgment and prudence"; "where fame and profit is concerned doctors agree to operate whatever the consequences may be"!

While he is lenient to much which we think discreditable, he is sentimental towards the public and severe on the doctor in other passages, such as that in which he says "doctors disgrace themselves and humilate us not a little when they insist on payment before attending cases of serious illness or accident in casual patients; such conduct is scandalous, inhuman, and intolerable," while the proposal to keep a black list of patients known to impose on the profession is called a "brutal, barbarous, inhuman method, and unworthy of us." His remarks on anaesthetics, and his refusal to allow their use in dental cases and in normal labour, indicates a mind ill-qualified to advise on medical ethics; his extraordinary views on obstetrics have had to be modified by a sensible note contributed by Sir Francis Champneys, for which we are grateful. As an account of the state of the profession of medicine in France the book has its interest, but it cannot be taken seriously as a guide to medical ethics in this country.

NOTES ON BOOKS.

THE issue, after a short interval, of a second edition of Dr. WHITELOCKE'S book on *Sprains and Allied Injuries of Joints*[11] is a result of the favour this work has received from both British and American surgeons. The fresh matter in this edition includes an account of an interesting lesion in the head of the tibia which, though distinctly a traumatism, is called, in association with the name of Schlatter, a disease. An instructive description is given of this condition, which is a result, and, it seems, not an infrequent one, of athletic exercise. In the new chapter on special methods of treatment, Dr. Whitelocke, while hopeful in regard to the prospects and future possibilities of some of these, especially Bier's hyperaemic method and kataphoresis, writes as one who is evidently well satisfied with the ordinary treatment of sprains.

[11] *Sprains and Allied Injuries of Joints.* By R. H. Anglin Whitelocke, M.D., M.C.Edin., F.R.C.S.Eng., Honorary Surgeon to the Radcliffe Infirmary and County Hospital at Oxford, Litchfield Lecturer in Surgery in the University. Second edition. London: Henry Frowde (Oxford University Press), and Hodder and Stoughton. 1910. (Demy 8vo, pp. 280; 85 illustrations. 7s. 6d.)

Within the lifetime of the present generation hospital management has undergone a great transformation. Lord Lister has made Mrs. Gamp an impossibility in a hospital of to-day. "Listerism" requires as a first and foremost necessity clean and intelligent nurses. It requires nurses who are clean because they know the meaning and importance of surgical cleanliness, and who can be trusted with the custody and use of poisonous chemicals. Hence the care taken by hospital matrons to choose the proper persons as nurses and the trouble taken by medical men to give nurses enough knowledge to enable them to take an intelligent interest in their work. At the Middlesex Hospital and at the Chelsea Hospital for Women, Dr. COMYNS BERKELEY has for the last twelve years been accustomed to lecture to nurses in order that they may better understand the requirements of the department of surgery that he practises. The nurses so value his instructions that they have asked him to print the substance of them.[12] The utility of the work is that it will fix in the minds of Dr. Berkeley's pupils the essential features of his oral teaching. At a few places he seems to us to have written hastily; thus at p. 12, among the causes of amenorrhoea, we find "ovarian tumours"; but on p. 14 we find that ovarian tumours only cause amenorrhoea "when the health is impaired by the tumour." Regular menstruation is not uncommon when the tumour is small. On p. 17 we find among the causes of menorrhagia "diseases of the heart"; but Gow has shown that the effect of such disease is in the opposite direction. And is there any evidence that round worms cause pruritus vulvae, as they are said to do on p. 30? These are little things, and we trust Dr. Berkeley will pardon our directing attention to them. The directions for the preparations for operation and nursing are excellent. They represent the practice at the Middlesex and Chelsea Hospitals. They include the scrubbing of the skin with different chemicals, of which Lord Lister has expressed his disapproval, but which is very prevalent at the present time. Dr. Berkeley's *Gynaecology for Nurses and Gynaecological Nursing* well fulfils its object.

After a long interval the second part of volume two of the translation of LAFAR'S *Technical Mycology*[13] has been published. It is more than seven years now since the first part was reviewed at some length in the JOURNAL (September 19th, 1903, p. 661), and we are glad to be able to renew the favourable criticism then expressed. The book is bulky, but not out of proportion to the scientific and industrial importance of the subject, and the extensive bibliography covering 135 pages gives some idea of the enormous amount of material which the author has had to collate. The effort has undoubtedly been successful, and it appears to have lost little of its value in the translation.

As *Black's Medical Dictionary*[14] has reached its fourth edition, it may be said to have passed beyond the realm of criticism, although we may express our doubt whether "district nurses, ship captains, dwellers in remote districts and others who may be called on to treat sufferers in the absence of trained supervision" can really require the sort of information which is contained in some of these articles, or that they are likely to be any the wiser for the anatomy, physiology, and pathology so liberally dispensed to them. The author in his preface also draws attention to the fact that "almost no reference has been made to diagnosis, a highly technical matter which lies entirely within the province of the trained medical man," yet in order that district nurses and others who use this book should be capable of utilizing the directions as to treatment of, for example, such a disease as tuberculous meningitis or typhoid fever or any of the other serious diseases discussed in this volume, it must be assumed that they are competent to make a correct diagnosis.

[12] *Gynaecology for Nurses and Gynaecological Nursing.* By Comyns Berkeley, B.A., M.B., B.C.Cantab., F.R.C.P., Obstetric Physician to the Middlesex Hospital, Surgeon to In-patients Chelsea Hospital for Women, etc. London: The Scientific Press, Limited. (Cr. 8vo, pp. 114. 2s. 6d.)

[13] *Technical Mycology: the Utilization of Micro-organisms in the Arts and Manufactures.* By Dr. Franz Lafar. Vol. ii, Part II. Translated by C. T. C. Salter. London: C. Griffin and Co. 1910. (Demy 8vo, pp. 757; figs. 59. 18s.)

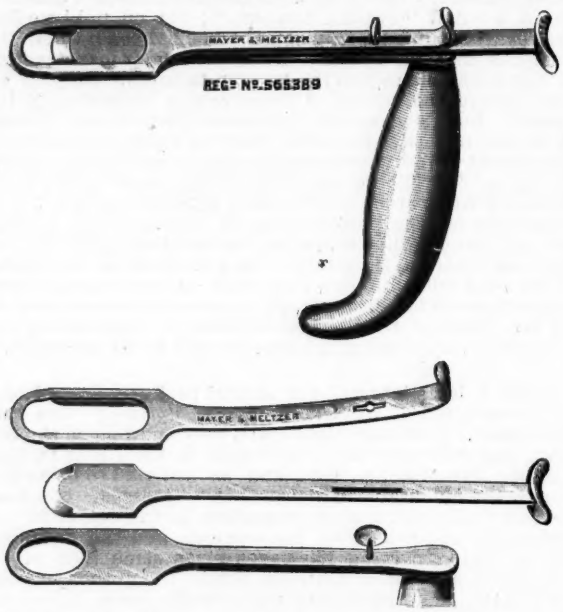
[14] *Black's Medical Dictionary.* Edited by John D. Comrie. Fourth edition. London: Adam and Charles Black. 1910. (Cr. 8vo, pp. 865. 7s. 6d.)

THE International Congress on Tuberculosis will hold its next meeting in Rome in September (24th to 30th). The work has been divided into three groups: Etiology and Epidemiology; Pathology and Therapy; the Social Campaign against Tuberculosis.

MEDICAL AND SURGICAL APPLIANCES.

An Improved and Simplified Aseptic Mackensie Guillotine.

MR. HUGH E. JONES (Honorary Surgeon, Liverpool Eye and Ear Infirmary) writes: In spite of the many modifications and improvements which have been made from time to time in Mackensie's guillotine, some of its defects have remained in one or other pattern, and some are common to all: (1) The difficulty of cleaning the groove and slot along which the blade passes; (2) the large number of parts, some of which were small, easily detached, and easily lost; (3) the dependence of the instrument for its proper working upon two screws, the threads of which rapidly wore out; and the fact that these defects usually became manifest during an operation. I have devised an instrument in which these defects have been entirely eliminated. I am indebted to Messrs. Mayer and Meltzer for the great interest they have shown in the instrument, and the pains they have taken to produce a really workmanlike tool. The main points of the instrument may be



summarized as follows: (1) It consists of three separate parts instead of, as in most other patterns, six. (2) There are no screws in it; the handle and turn-button which holds down the spring are permanently attached to the bed-plate. (3) The bed-plate has no grooves at the side or slot at the end, so that it can be cleaned perfectly in a few seconds. (4) The spring and retaining sheath for the blade are in one piece, and, as the grooves are open, this part also can be cleaned in a few seconds. (5) The handle is of an entirely new shape, with a slight forward tilt and a forward curve at its extremity, giving great power of lateral pressure against the pillars of the fauces, but it is hoped that by further experiment a still better handle will be evolved. (6) The instrument can be taken to pieces and put together again in ten seconds by the watch. (7) A nurse can thoroughly clean and polish the whole instrument, preparatory to sterilizing or putting away, in three minutes. (8) An extended trial shows that it is thoroughly efficient in its work, the blade being in perfect apposition to the bed-plate, and held down by exactly the right amount of pressure applied in the right place.

"Tabloid" Chemicals for Colour Photography.

The production of photographs in natural colours apart from its artistic interest is a valuable addition to the weapons of the scientist, and will doubtless become increasingly the recognized method of recording observations of pathological conditions wherever the element of colour is of importance. For instance, photographs of skin diseases, histological specimens, and examples of abnormal growths, gain much in clearness and in the amount of information conveyed, when faithfully reproduced in colour. The chemical processes involved in the production of such photographs for reversing the image and for intensifying the colours have now been conveniently provided for in a set of three "tabloid" products which enable the amateur to experiment with all the brands of colour plates now on the market, with the minimum expenditure of time and trouble. The whole process of development, reversal, redevelopment, and intensification can be carried out with solutions of Tabloid Rytol, Tabloid Reversing Compound, and Tabloid Colour Plate Intensifier, and by following the instructions given successful results in natural colour can be obtained with the Autochrome, Thames, Omnicolore, and Dufay plates.

MEDICINAL AND DIETETIC PREPARATIONS.

Digestin.

WE have received from Messsr. Burgoyne, Burbidges, and Co. (16, Coleman Street, London, E.C.), a sample of a new digestive ferment which is likely to be both interesting and useful. The substance, to which the name "Digestin" is given, is made by Yenjo Shoten, Limited, Tokyo, Japan, and it is stated to be derived from a fungus belonging to the genus *Aspergillus*. It is characterized by possessing both proteolytic and amylolytic activity in marked degree. Digestin is a fine powder of buff colour, soluble in water; it has a slight taste recalling that of papain. Our tests showed that, if added to a solution of 100 times its weight of gelatine and the mixture maintained at body temperature, the gelatine is so completely converted that the liquid shows no power of setting on cooling, and gives the biuret reaction for peptone. When another portion of the ferment was added to starch paste and the mixture kept at body temperature, the starch underwent conversion to dextrine and maltose. It is claimed that it will digest fibrin, milk protein, and other nitrogenous material in acid, neutral or alkaline solutions, and that it will accordingly find application in a very large variety of cases of defective digestion.

STATE SICKNESS INSURANCE.

IT is evident that the scheme for State sickness insurance that appeared in the *Times* and other papers will not be allowed to pass without a determined opposition from several quarters, and in some correspondence in the *Liverpool Daily Post* Professor B. Moore has restated in a forcible way the objections which he had expressed in the BRITISH MEDICAL JOURNAL of January 7th against what he regards as the granting of a great monopoly to the friendly societies. Professor Moore suggests that the scheme referred to may be, and he hopes it is, only "a dream of an official of a friendly society," and that the officials of the societies, "scenting danger to their present monopoly of the sickness insurance of the industrial classes in the State insurance scheme, at first tried their utmost to discredit and wreck the scheme . . . and, finding such tactics unavailing, they next determined to corral the whole scheme and run it themselves." He thinks that a similar procedure has wellnigh ruined the German scheme, as in Germany "the workmen's insurance societies sweat the doctors, and the doctors scamp their work for the workmen, and the whole scheme is vicious to the last degree." He asserts that "the placing of the sick payment of the workmen under the control of the friendly societies is the first step—which counts for most—towards a complete establishment of such a monopoly system in our own country," with its concomitant evils, not only to the medical profession, but to the insured workmen themselves and to the whole community. He draws attention to the difficulty, which so many others have pointed out, that the workmen will experience in making 5s. a week suffice for the support of themselves and family during sickness, as well as for the provision of medical attendance; moreover, he contends the method proposed is far from economical. He considers, too, that the record of work done by the friendly societies, especially in connexion with medical attendance on that one-fifth of the working classes for which they have been catering in the past, is not "so excellent that the compulsory handing over of the remaining four-fifths by the Government can be regarded with any equanimity by the sociologist." He says that medical work for friendly societies or clubs "is the universal detestation of the profession throughout the whole country," but that the medical men are forced to do this work under sweated conditions or else to starve. "Only the doctors know what a terrible evil this pernicious system is to the patients themselves

Thousands of lives are lost yearly because of the scamped inefficient medical work arising from the sweating of the medical profession by medical clubs, tontines, and friendly societies. This is the curse from which many of us in the medical profession hoped we might be freed by the new State sickness insurance scheme, and behold, it would appear that it is to receive a fivefold extension, and the workmen are to be compelled to share in it, whether they wish to do so or not."

It is further suggested by Professor Moore that "the Government should offer to take over the existing permanent friendly societies as going concerns," and give their officials posts under Government control, that this would save hundreds of thousands of pounds annually in the expenses of unnecessary and much reduplicated middlemen, and we might then "possess an adequate medical service for our workmen instead of a sickening travesty of medical attention demoralizing and degrading to doctor and patient alike."

It could not be expected that Professor Moore's remarks would escape severe criticism by officials of the friendly societies, and Mr. W. J. Eaves, who is honorary secretary of the council of the Liverpool and District Tontine Societies, charges Professor Moore with "an insolent attack upon friendly societies in general and gross libel on the medical profession." He further goes on to say that Professor Moore's statement "that thousands of lives are lost yearly because of inefficient medical attendance of club doctors casts a grave reflection on the honesty and character of the medical profession, but those of us who have placed our lives in the hands of club doctors can from practical experience refute such statements." Surely it ought to have been evident that Professor Moore never for a moment cast any doubt on the honesty or intentions of the club doctors; his contention was that the system placed them in such a position that, with the best intentions in the world, they were often physically unable to do justice to their club patients. Moreover, Professor Moore's strictures on the club system simply echoed the scathing denunciation of the system that appears in the report of the Poor Law Commission, and in his reply he says he was not personally blaming the officials of the societies, the doctors, or the workmen, but a system which is full of evils, holding that our present methods of dealing with disease in dispensary, hospital, and club practice are a wretched travesty on science. He quotes statistics of Dr. Newsholme, the medical officer of the Local Government Board, showing that something like 300,000 lives are annually lost through preventable causes, lives "which might be spared if we possessed a system which would enable us to apply that much of medical science which we already possess, without one particle more of research." Professor Moore considers that "the most efficient step towards betterment would be the establishment of such a liberal scheme of State sickness insurance that free and efficient medical attendance was given to every sick person just as every child may and must have efficient education at school." It had been hoped that State sickness insurance would be the first step towards treating disease on natural lines, but, after reading the article that appeared in the *Times*, the scheme seemed to him to be "obscured by a picture of the friendly societies stretching out hundreds of eager hands to convert it into a business monopoly."

Professor Moore does not attempt to elaborate what he means by "free and efficient medical attendance for every sick person," and widely divergent opinions may be held on that question; but it should be remembered that the scheme sketched out in the *Times* article simply ignores medical attendance. It may seem at first sight that the scheme depends on the friendly societies for the provision of medical attendance, and in actual practice it would probably involve an attempt on the part of the societies to extend their medical clubs. But, after all, the settlement of the question as to how medical attendance shall be provided for the insured depends on the medical profession itself far more than on the friendly societies. It seems probable that if things are allowed to slide, the clubs will be extended on their present basis; only by vigorous and united action will the profession be able to reform the present system, or, if it so decide, replace it by another which will ensure satisfaction to the community and the profession alike.

Nova et Vetera.

SOME ROYAL DEATH BEDS.

(Continued from page 1532, Vol. ii, 1910.)

GEORGE I.

THE first George was a man of robust constitution which seemed to give the assurance of a long life. But Etough, in a letter to Dr. Birch, preserved in the British Museum, says that the King's fondness for sturgeon, rich food, and hot punch, and his custom of indulging in hearty suppers late at night, tended to undermine his health. The words in the *Vicar of Bray*, "When George in pudding time came o'er," seem to allude to his love of eating. Moreover, he had many mistresses. Towards the end of his life he was a wreck. But his passion for eating survived, and gluttony seems to have hastened his end. On June 3rd, 1727, he set out for Hanover. He landed in Holland, and at a place not far from Delden he had a hearty supper with Count von Twittel, and consumed an unusual quantity of melons. On June 10th he set out for Osnaburg. The circumstances of his last illness rest chiefly on the authority of Archdeacon Coxe, who collected all the available information on the subject from eye-witnesses and from persons who remembered the event. He says:[1]

> On his arrival at Bentham the King felt himself indisposed, but continued his journey in opposition to the repeated entreaties of his suite. His indisposition increased, and when he arrived at Ippenburen he was quite lethargic; his hand fell down as if lifeless, and his tongue hung out of his mouth. He gave, however, signs of life, by continually crying out, as well as he could articulate, "Osnaburg, Osnaburg." This impatience to reach Osnaburg induced the attendants not to stop at Ippenburen, but to hasten on in hopes of arriving at that city before he died. But it was too late. The exact time and place of his death cannot be ascertained; but it is most probable that he expired either as the carriage was ascending the hill near Ippenburen, or on the summit. On their arrival at the palace of his brother, the Bishop of Osnaburg, he was immediately bled, but all attempts to recover him proved ineffectual.

A legend grew up that the unfortunate Sophia Dorothea, shortly before her death, addressed a letter to her royal consort, in which, after emphatically asserting her innocence, she ended by solemnly citing him to appear on a certain day before the Divine Tribunal. This letter, it is said, was presented to the King on his entering his German dominions. He appeared to be awestruck by the contents, and immediately afterwards was attacked by the illness which proved fatal. The authority for this story is Lockhart, of Carnwath. This "trustworthy chronicler," as he is called by Jesse, states that in the year of the King's death he was actually shown the letter by Count Welling, Governor of Luxemburg. More details as to the manner of his death are supplied in a letter from George Baillie to Alexander Earl of Marchmont, dated June 15th, 1727:[2]

> The melancholy news came by express yesterday. He (George I) had been ill at sea, and continued so on the road, but would not stop. On Friday night he was taken with a severe purging and great sweating, which weakened him much. He would, however, go on; and upon Saturday lost his speech and the power of one side, but still made signs with his hand to proceed, and in the evening arrived at Osnaburg, where he died about one o'clock Sunday morning.

He had had some premonitory symptoms of apoplexy at Charlottenburg in 1723.

King George expired on June 11th, 1727, in the sixty-eighth year of his age, and the thirteenth after his accession to the throne of England.

We cannot refrain from quoting the account of George's death given by Carlyle in his *History of Frederick the Great*:

> "With the Solstice, or Summerpause of the Sun, 21st or 22nd June (*sic*), almost uncertain which, the Majesty of George I did likewise pause—in his carriage, on the road to Osnabrück—never to move more. Whereupon, among the simple People arose rumours of omens, preternaturalisms for and against: How his desperate Megaera of a Wife, in the act of dying, had summoned him (as was

[1] Quoted by John Heneage Jesse in his *Memoirs of the Court of England from the Revolution in 1688 to the Death of George II.* Vol. ii, p 315.

[2] *A Selection from the Papers of the Earls of Marchmont.* Edited by the Right Hon. Sir G. H. Ross, vol. ii, p. 411.

presumable), to appear along with her at the Great Judgment-Bar within year and day; and how he has here done it. On the other hand, some would have it noted, How 'the nightingales in Herrenhausen Gardens had all ceased singing for the year, that night he died,'—out of loyalty on the part of these little birds, it seemed presumable.

"What we know is, he was journeying towards Hanover again, hopeful of a little hunting at the Gohrde; and intending seeing Osnabrück and his Brother the Bishop there as he passed. That day, June 21st, 1727, from some feelings of his own, he was in great haste for Osnabrück; hurrying along by extra-post, without real cause save hurry of mind. He had left his poor old Maypole of a Mistress on the Dutch frontier that morning, to follow at more leisure. He was struck by apoplexy on the road—arm fallen powerless early in the day, head dim and heavy—obviously an alarming case. But he refused to stop anywhere; refused any surgery but such as could be done at once. 'Osnabrück! Osnabrück!' he reiterated, growing visibly worse. Two subaltern Hanover officials, Privy Councillor von Hardenberg, *Kammerherr* (Chamberlain) von Fabrice, were in the carriage with him; King chiefly dozing, and at last supported in the arms of Fabrice, was heard murmuring, '*C'est fait de moi* ('T'is all over with me)!' And 'Osnabrück! Osnabrück!' slumberously reiterated he: 'To Osnabrück, where my poor old Brother, Bishop as they call him, once a little boy that trotted at my knee with blithe face, will have some human pity on me!' So they rushed along all day, as at a gallop, his few attendants and he; and when the shades of night fell, and speech had now left the poor man, he still passionately gasped some gurgle of a sound like 'Osnabrück'; hanging in the arms of Fabrice, and now evidently in the article of death. What a gallop, sweeping through the slumber of the world: To Osnabrück, Osnabrück!

"In the hollow of the night (some say one in the morning) they reach Osnabrück. And the poor old Brother—Ernst August, once youngest of six brothers, of seven children, now the one survivor, has human pity in the heart of him full sorely. But George is dead; careless of it now."

To this Carlyle appends the following characteristic footnote:

Coxe (i, 266) is "indebted to his friend Nathaniel Wraxall for these details—the since famous Sir Nathaniel, in whose *Memoirs* (vague, but *not* mendacious, not unintelligent) they are now published more at large. See his *Memoirs of the Courts of Berlin, Dresden, etc.* (London, 1799), 35-40; also *Historical Memoirs* (London, 1836), iv, 516-518.

GEORGE II.

George II died on October 25th, 1760, at the age of 77 and in the thirty-fourth year of his reign. His death is described as follows by Horace Walpole in a letter to Sir Horace Mann:

On Friday night the King went to bed in perfect health, and rose so the next morning at his usual hour of six; he called for and drank his chocolate. At seven (for everything with him was exact and periodic) he went into the closet to dismiss his chocolate. Coming from thence his *valet de chambre* heard a noise, waited a moment, and heard something like a groan. He ran in, and in a small room between the closet and bedchamber he found the King on the floor, who had cut the right side of his face against the edge of a bureau, and who after a gasp expired. Lady Yarmouth was called, and sent for Princess Amelia, but they only told the latter that the King was ill and wanted her. She had been confined some days with the rheumatism, but hurried down, ran into the room without farther notice, and saw her father extended on the bed. She is very purblind, and more than a little deaf. They had not closed his eyes. She bent down close to his face, and concluded he spoke to her, though she could not hear him. Guess what a shock when she found the truth!

What an enviable death! In the greatest period of the glory of this country, and of his reign; in perfect tranquillity at home, at 77, growing blind and deaf, to die without a pang, before any reverse of fortune or any distasteful peace, nay, but two days before a shipload of bad news. Could he have chosen such another moment!

In a letter to George Montague, dated the day following the King's death, Walpole gives a similar and no less interesting account of that event:

He went to bed well last night, rose at six this morning as usual, looked, I suppose, if all his money was in his purse, and called for his chocolate. A little after seven the German *valet de chambre* found the hero of Oudenarde and Dettingen on the floor, with a gash on his right temple, by falling against the corner of a bureau. He tried to speak, could not, and expired.

Wraxall[3] says:

A rupture in some of the vessels or in the membranes of the heart carried him (the King) off in a few minutes. During his whole life, but particularly for a number of years before his decease, he had been subject to such constant palpitations about the region of the heart, especially after dinner, that he always took off his clothes and reposed himself for an hour in bed of an afternoon. . . . His sight had greatly failed him for some time preceding his decease. I have heard Mr. Fraser say, who was during many years Under Secretary of State, that in 1760, a few months before the King died, having presented a paper to him for his signature at Kensington. . . . George II took the pen in his hand and after, as he conceived, affixing his name to it, returned it to Fraser. But so defective was his vision that he had neither dipped his pen in the ink nor did he perceive that of course he had only drawn it over the paper without making any impression. Fraser, aware of the King's blindness, yet unwilling to let his Majesty perceive that he discovered it, said: "Sir, I have given you so bad a pen that it will not write; allow me to present you with a better pen for the purpose." Then dipping it himself in the ink, he returned it to the King, who, without making any remark, instantly signed the paper.

We think many of our readers will be glad to read Carlyle's graphic account[4]:

Saturday 25th. October 1760, George II., poor old gentleman, suddenly died. He was in his 77th year; feeble, but not feebler than usual,—unless perhaps the unaccountable news from Kloster Kampen may have been too agitating to the dim old man? On the Monday of this week he had, "from a tent in Hyde Park," presided at Review of Dragoons; and on Thursday, as his Coldstream Guards were on march for Portsmouth and foreign service, "was in his Portico at Kensington to see them pass;"—full of zeal always in regard to military matters, and to this war in particular. Saturday, by sunrise he was on foot; took his cup of chocolate; inquired about the wind, and the chances of the mail arriving; opened his window, said he would have a turn in the Gardens, the morning being so fine. It was now between 7 and 8. The Valet then withdrew with the chocolate apparatus; but had hardly shut the door, when he heard a deep sigh, and fall of something,—"billet of wood from the fire?" thought he;—upon which, hurrying back, he found it was the King, who had dropt from his seat, "as if in attempting to ring the bell." King said faintly, "Call Amelia," and instantly died. Poor deaf Amelia (Friedrich's old love, now grown old and deaf) listened wildly for some faint sound from those lips now mute forever. George Second was no more; his grandson George Third was now King.

It is a curious fact recorded by historians that through the Hanoverian Royal Family there ran an affectation of incapacity to be sick.

I have known the King (says Lord Hervey) get out of his bed choking with a sore throat, and in a high fever, only to dress and have a levée, and in five minutes undress and return to his bed till the same ridiculous farce of health was to be presented the next day at the same hour.

It will be remembered that King Edward VII persisted in discharging his official duties till within a few hours of his death.

Not all George II's subjects would have accepted Walpole's description of him as full of glory. Writing to Baretti on June 10th, 1761, Johnson says: "We were so weary of our old King that we are much pleased with his successor; of whom we are so much inclined to hope great things that most of us begin already to believe them."

Some years later we find Boswell chronicling a dinner at Tom Davis's in 1775, where Johnson, after defending the memory of Charles the Second, is reported to have said:

George the First knew nothing, and desired to know nothing did nothing, and desired to do nothing; and the only good thing that is told of him is that he wished to restore the crown to its hereditary successor.

Boswell goes on to say:

He roared with prodigious violence against George the Second. When he ceased Moody interjected, in an Irish tone and with a comic look, "Ah! poor George the Second."

George II was a man of vigorous constitution and very temperate habits. A *post-mortem* examination showed that the cause of his death was rupture of the right ventricle of the heart.

[3] *The Historical and Posthumous Memoirs of Sir Nathaniel William Wraxall, 1772-1784.* Edited by Henry B. Wheatley, F.S.A. Vol. i, p. 313.

[4] *History of Frederick the Great.*

LITERARY NOTES.

DR. ALBERT ROBIN, Professor of Clinical Therapeutics in the University of Paris, and Member of the Académie de Médecine, has succeeded the late Dr. Huchard as editor of the *Journal des praticiens*.

From January, 1911, the *Journal of Experimental Medicine* will be issued monthly instead of bi-monthly as heretofore. This will mean the publication of two volumes a year, each containing about 600 pages.

The *Medical Officer* has recently extended its range by the establishment of a supplement, the nature of which is described by its title, "The Review of Bacteriology and General Parasitology, being an Epitome of recent literature of Bacteriology, General Parasitology, and allied Subjects in their relationship to Pathology and Hygiene." It is edited by Mr. Alexander G. R. Foulerton, F.R.C.S., and will appear at least twelve times in the course of each year. We congratulate our contemporary on its enterprise, which, as far as can be judged from a first number, seems to us likely to be useful not only to medical officers of health, but to all practitioners of medicine.

In the *Companion to Latin Studies*, edited for the Syndics of the University Press by John Edwin Sandys, Litt.D., Public Orator in the University of Cambridge, there are two sections of special interest to medical readers contributed by the late Dr. J. Frank Payne. Under the head of Roman Natural History he deals with the elder Pliny, author of the famous *Naturalis Historia*, which made so deep an impression on the mind of Europe that traces of it still survive in folklore and popular speech. He says that Pliny's oft-quoted statement that the Romans did without physicians for six hundred years must not be taken as literally true. The Romans, though they had framed no organized art of medicine, had their own methods of dealing with diseases and injuries. Among these the principal was an appeal to supernatural powers. Gradually there grew up an empirical art of rough surgery and simple domestic medicine, with some admixture of magical folklore. Dr. Payne points out that the word *medicus* is an old Roman word (not Greek), and occurs in the *Lex Aquilia* of the third century B.C. The old Roman medicine consisted of three branches: (1) Sacred rites paid to the higher gods of healing; (2) deprecatory rites paid to the malevolent deities who caused special diseases; (3) an empirical popular medicine. Among the ancient gods of healing, the chief was *Salus*, an old Roman or Sabine goddess, whose temple stood on the *Mons Salutaris*, one of the summits of the Quirinal. Another was the goddess *Carna*, invoked to preserve the health of the bodily organs. In the fifth century B.C., on the occasion of a pestilence, a temple was dedicated to Apollo, who was later honoured as *Apollo Medicus*. Mars also was regarded as the protector against plagues and other diseases. It has been reckoned that at least twenty gods and goddesses might exercise their powers at one childbirth. Greek medicine was introduced with the worship of Asklepios (293 B.C.) and the advent of the Greek physicians Archagathus (219 B.C.), Asclepiades (*circa* 100 B.C.), and Galen (163 A.D.). Archagathus was a Spartan. He was granted the right of Roman citizenship, and an office was bought for him at the public expense. He would seem to have practised his art in a Spartan spirit, for although his skill in surgery at first won for him the title of *vulnerarius*, he soon received the significant nickname of *carnifex*. This, however, need not be taken as meaning that he was brutal; did not Lisfranc speak of Dupuytren as *le grand boucher du bord de l'eau*? Of Asclepiades, who was a "fashionable physician" in the best sense, nothing need be said; Sir Clifford Allbutt has painted the doctor and the man with a master hand in one of his FitzPatrick Lectures on Greek Medicine in Rome, which was published in the BRITISH MEDICAL JOURNAL of November 27th, 1909, page 1515 et seq. Of Celsus, Dr. Payne says that it is clear that he was not a professional doctor, but a Roman patrician, who, like Cato, took medical charge of his own family and slaves. He himself refers to practice in the *valetudinaria* or slave-infirmaries. The treatise, *De Medicina*, which was written in the reign of Tiberius, and was intended for the lay public, is the second part of a large work in six parts, the first of which was on agriculture, the third on the military art, the fourth on rhetoric, the fifth on philosophy, the sixth on jurisprudence. Speaking of Galen, Dr. Payne says his scientific method was admirable:

> He brought everything to the test of experiment, and though we cannot say positively that no one before him had made experiments on animals, he is historically the founder of experimental physiology. His methods of experiment and reasoning were quite in agreement with those of modern times.

Dr. Payne gives a good account of the condition of medical practice and the social condition of those who professed the art of healing in ancient Rome. Of this we hope to give a summary in a later issue.

In a thesis for the degree of Doctor of Medicine, presented to the University of Paris on March 11th, 1909, M. G. Berthe gives a history of purgation. He shows the antiquity of this therapeutic measure. The Chinese used purgatives fifteen centuries before the Christian era; in the old Egyptian papyri dealing with medicine there are many receipts for the relief of constipation. Curiously enough he does not quote Pliny, who, in the Eighth Book, Chapter XXVII, of his *Natural History*, translated by Philemon Holland, gives the following account of the origin of the enema:

> The like deuice to this, namely of clisters, we learned first of a Fowle in the same Egypt, called Ibis (or the blacke Storke). This bird hauing a crooked and hooked bill, vseth it in stead of a syringe or pipe to squirt water into that part, whereby it is most kinde and wholsome to auoid the doung and excrements of meat, and so purgeth and clenseth her body.

The Greeks attributed the discovery of purgatives to Aesculapius. Hellebore was largely used by them for the purpose. In addition to hellebore, Hippocrates recommended scammony, colocynth, elaterium, and other drugs; he also employed suppositories and enemas made of decoctions of cabbage, to which was added oil or honey. Among the old Romans Cato, who believed cabbage to be a panacea for all human ills, including broken bones, naturally held that it kept the bowels open. Asclepiades, who did not believe in drastic remedies, was opposed to the use of purgatives; Celsus also urged that they should be employed only in exceptional cases. Pliny pinned his faith largely on hellebore and aloes. Galen wrote a treatise, *De purgantium medicamentorum facultatibus*, in which he declares it to be a "crime" to deny that purgatives are specifics. He holds that they have a selective property, whereby each one acts specially on a particular humour; one setting free the black, the other the yellow bile, and so on. In the second century of the Christian era, Rufus of Ephesus wrote a treatise on enemas. The Arabs added tamarinds, senna, and other aperient substances to the materia medica. Mohammed himself did not disdain to lay down rules for the preservation of health and the cure of disease. One of the aphorisms piously gathered from his lips by a disciple is as follows: Three things have the property of healing our diseases with the exception of death—senna, "senout," and a third which the disciple confesses he had forgotten. So that the three infallible medicines are reduced to two, and of these only one was left, for having innocently asked what "senout" was, the disciple received from the Prophet the truly oracular reply, "If God had wished that you should know, He would have told you"! The Prophet, however, showed greater consideration for human weakness in others of his precepts. He recommends that purgatives should not be given either to the very aged or to children at the breast, to cachectics or those suffering from ulcers. He advises against a purge twice in the same day, or during extremes of hot or cold weather. He recommends enemas in colic and pains in the stomach. There was, however, some difference of opinion among the Mohammedans as to the use of the enema apparently on moral grounds. The Arabian physicians, however, used purgatives freely; the medicines of this kind most in favour with Avicenna were cassia, tamarind, scammony, aloes, and colocynth. It is to him we owe one of the earliest descriptions of the enema syringe. In the *Regimen Sanitatis* of Salerno we find a course of purgation recommended in the spring. The clyster is said to cure colic and flatulence, and to soothe pains about the heart, the kidney, and the liver; it is contraindicated in cases of hernia and intestinal abscess (? appendicitis). Throughout the Middle Ages purgatives were much in use, the substances employed being often of the most disgusting kind. In an edict against quacks promulgated by John the Good, King of France, in 1352,

t is set forth that the Dean and Masters of the Faculty of Medicine of Paris had informed him that divers persons of both sexes, especially old women and herbalists, ignorant of the science of medicine and of the properties of remedies, "especially of laxatives which were dangerous to life," came to practise in Paris. The monarch complains that these persons, flying in the face of reason and the principles of art, furnish and administer "very laxative clysters" without the presence of a doctor, to the great scandal of his people and to the grievous danger of their bodies and souls. Therefore he forbids them to make up or administer any syrup or elixir, or to give clysters in any serious disease. Purgatives came more and more into favour. In 1538 Thibault Lespleigney, an apothecary of Tours, wrote a *Promptuaire des Médecines Simples en Ritme Joyeuse*, in which he started from the fundamental (*honi soit !*) principle:

Qui veult vivre longuement
Du corps fault purger l'excrément

Such was the mediaeval belief in clysters that one seems to have been given to Martin Luther after he was dead, "to revive him if there was still any flicker of life." Purgation reached its zenith in the august person of Louis XIV; the *Journal de la Santé du Roi* is one long record of aperients and enemas. His Court naturally followed suit; Molière scarcely exaggerates when he sums up the medical practice of his day in the famous formula—

Clysterium donare
Postea saignare
Ensuita purgare
Resaignare
Repurgare
Reclysterizare.

M. Berthe quotes one or two apothecaries' bills sufficiently detailed to satisfy the most "businesslike" patient. Thus in an account for medicines and attendance rendered by Jean Feltre to Paul Ferry, a Protestant minister at Metz, we find the following items: April 3. His laxative cooling clyster, 2 francs. April 5. His clyster repeated, 2 francs; and so on, including, "August 2nd, for the servant girl, a laxative and emollient clyster, 1 franc 80." In the bill of another practitioner of the seventeenth century we find a milk clyster for the President's daughter; the same for "Monsieur le petit enfant"; the same repeated in both cases, and so on, at 15 sous each. Another bill, dated 1784, is for professional services rendered by a practitioner of Narbonne. We prefer to give it in the not altogether sweet simplicity of the original:

Le même 29e jour, j'ay visité le fondement et introduit le doigt à cause qu'il ne pouvait aller à la selle, cy ...	3 l.
De plus, le meme jour 29e j'ay donné audit un lavement, cy	6 s.
Le même jour j'ay donné au d. deux lavemens, cy ...	12 s.
Le même jour (1er juin) j'ay fait chier led. avec le doigt et l'ay vidé, cy	6 l.
Le 2 juin, on m'a fait lever dans la nuit, cy	6 l.

Would "Senior," who has lately complained in the *Times* of not getting a detailed account from his doctor, like this kind of thing?

SCIENCE NOTES.

A SHORT note[1] by Southwell on the worm which induces the formation of pearls in the Ceylon pearl oyster recalls the remarkable story of the mode of origin of these precious gems. Why and how pearls originate was for long a mystery, and around this many fanciful tales were woven. When eventually a scientific explanation was sought a variety of theories were evolved. Some held, with Rondelet, that their presence was due to a diseased condition of the shellfish, an opinion which, from its avoidance of detail, might be regarded as a very safe one; others, like Réaumur, came to the conclusion that the cause lay in an abnormal concretion or a superabundant secretion of the nacreous material of the shell. The grain of sand theory was a favourite one for a long time, and at the same time it was thought that any foreign body or any injury causing irritation might give rise to the production of pearls. On this view there seemed no reason why pearls should not be produced artificially as desired by suitable mechanical means. The Chinese have for long resorted to this procedure, and it is well known that Linnaeus boasted a secret process. Unfortunately such methods lead only to the production of blisters, and the numerous attempts to obtain true pearls by the introduction of foreign bodies or by boring the shell have always resulted in failure. It was De Filippi who, in 1852, discovered what is now generally regarded as the natural method of pearl formation. He was struck with the occurrence of encysted larval trematodes in a pearl-bearing freshwater mussel, and he suggested that the parasite might give rise to the pearl much in the same way as a gall-fly causes the production of a gall-nut. A few years later Möbius confirmed this supposition to some extent by finding trematode remains in pearls from American pearl oysters. Since that time a considerable number of zoologists have added evidence in support of the parasitic origin of pearls, and the matter has been gone into very fully, particularly by Jameson in this country, and Herdman and others in connexion with the Ceylon pearl fishery. The scientific inquiry has suggested new economic aspects, and it is apparent that, with an accurate knowledge of the life-history of the parasites in question, some aid, even though small, may be lent to the natural process. The story of pearl formation, as disclosed by scientific research, savours of the marvellous, and one would be at first inclined to receive with incredulity the statement that tapeworms and sharks have as much to do with the production of pearls as the oyster itself. The fact, however, has now been established for some years that the beautiful Ceylon pearls owe their existence to a tapeworm parasite of sharks. The tapeworm itself is a peculiar form. It belongs to the genus *Tetrarhynchus*, and is characterized by the presence on its head of four long rhynchi or proboscides, covered with an enormous number of hooks. The embryos of this tapeworm, when discharged into the sea, select the pearl oyster as an intermediate host, bore their way into the mantle, and become encysted there. They naturally give rise to some irritation and the oyster reacts by forming an epithelial sac around the cyst. How this epithelial sac arises, whether it is due to a tag of epithelium carried in by the parasite or to a transitional formation of epithelium from the surrounding cells, is still unsettled, but there is little doubt that it is this sac which secretes the pearl, layer by layer, around the parasite. The process takes some time, during part of which the parasite remains alive, so that should the oyster be devoured by a shark, the latter is reinfected with the tapeworm, and thus the life-cycle completed. In the event of such a fate not befalling the oyster, it continues to increase the pearl until the parasite is killed, and finally only unrecognizable débris is left. In the section of a perfectly formed pearl, therefore, the existence of a parasite might be entirely unsuspected. The discovery of the epithelial formative sac is mainly due to Jameson, who worked with the common edible mussel. This shellfish is a well-known pearl producer, although the pearls are of little commercial value, being dull in colour. In this instance the parasite is a fluke, with an even more remarkable history than the tapeworm of the Ceylon pearl oyster. It belongs to the genus *Gymnophallus*, which comprises several species, all of which may be concerned in pearl production. In the adult state these parasites show a peculiarity of habitat which is striking in itself, for they live in the appendages of the intestine—for example, the gall bladder, caeca, and bursa Fabricii of marine birds, such as gulls, eider-ducks, scoters, and shelducks. In this case, however, the embryos when dropped into the sea do not make their way directly to the mussel. They first of all attack some other shellfish, such as the cockle, in which they form sporocysts. From the latter larvae are liberated, and it is they who seek the mussel, and, boring into its mantle, originate the pearl. As with the Ceylon oyster, the mussel may be eaten by a bird before the pearl has had time to form, and so the parasite again reaches its final host. From this it is evident that for the production of pearls in mussels the presence of two other animals is necessary, namely, a mollusc-eating bird and a cockle or other shellfish, to serve as a first host. It is well known that in places where mussels are not associated with this first host they do not produce pearls, and it is in the recognition of such facts as this that economic application may be possible.

[1] *Ceylon Marine Biol. Rept.*, 1910, pp. 169–172.

British Medical Journal.

SATURDAY, JANUARY 28TH, 1911.

THE INSPECTION OF FOOD IN ENGLAND AND WALES.

THE portion of the Annual Report for 1909-10 of the Medical Officer of the Local Government Board which deals with the work of inspectors of foods, written by Dr. G. S. Buchanan and issued as an official paper, contains a survey of the work done during the year in checking the soundness and purity of both imported and home-prepared foods of many kinds, and furnishes a good deal of interesting and important information. The principal part of the report is divided into four sections, dealing respectively with: Work in Special Relation to the Public Health (Regulations as to Food) Act, 1907, Local Arrangements for Meat and Food Inspection, Work in Special Relation to the Sale of Food and Drugs Acts, and Foreign and Colonial Food Legislation.

The Public Health (Regulations as to Food) Act, 1907, gave the Board increased powers of making and enforcing regulations. The effect is now beginning to show itself, and it is satisfactory that the medical officer of the Board is able to report that "the regulations made under that Act have already in many directions prevented unsound or unwholesome foods from passing into consumption, and that the exercise of these new powers by the sanitary authorities concerned has had a marked effect in improving generally the condition in which foods arrive at our ports." The first section of the report, dealing with work in connexion with this Act, is concerned with imported food and its examination at the port of entry into the United Kingdom. In a country so largely fed from abroad it is evident that this must be in many ways the most important division of the work of preventing unfit food from reaching the consumer; some idea of the magnitude of the task involved may be formed from the figure given for imported mutton and beef, which is stated as 10,902,360 cwt. for the year 1909. After the exposure, a few years ago, of the methods prevailing in some Chicago packing houses, stricter regulations were adopted in the United States in regard to meats packed for consumption in that country, but these did not apply to materials exported to Britain; and an impression has prevailed to some extent that foods generally were admitted here which would not be permitted to be sold in some other countries. An instance mentioned in the report shows the existence of some grounds for such an impression in the past; a consignment of 533 sides of beef from Antwerp was found to contain no less than 21 sides conspicuously affected by tuberculosis, and inquiry showed that the beef was derived from a shipment of Danish cattle, rejected on the German frontier on the application of the tuberculin test, and then sent to Antwerp to be slaughtered and sent here. In some cases it has been found that imported beef had been "stripped"—that is, the pleura, which is the common seat of tuberculous lesions in the thorax, had been removed; this raises a strong presumption that it has been removed in order that the tuberculous infection may not be detected, and the Board has now made a regulation refusing admission for human consumption to all "stripped meat."

In many exporting countries official inspection at the time of slaughtering is provided, and an official certificate is issued in respect of such meat. This system is commended in the report, and it is remarked that competent examination at the port of slaughter must always furnish a more satisfactory means of detecting disease in meat than can be afforded by inspection of the dressed carcass. It appears, however, that "officially certified" pork is not always satisfactory, as it is stated that the existence of disease has seldom been detected in it. In a consignment of 4,643 carcasses of pork from a British firm in Hankow, which were stated to have been examined for disease at the packing house, 8.4 per cent. were condemned and destroyed as tuberculous. Frozen livers from Argentina have in many cases been condemned owing to the presence of parasitic cysts and other disease conditions; the Board has caused representations to be made to the Argentine Government, in anticipation of a stricter supervision being exercised in this matter by the meat inspection service of that country.

In certain cases imported food is found to be in an unfit condition for passing into the ordinary channels of commerce, with a resulting delay before it reaches the consumer, while actually suitable for immediate consumption; this applies especially to fruit, and it is arranged that in such cases the fruit shall be immediately disposed of to hawkers and retailed by them without delay. A somewhat similar provision is made for tins of condensed milk which have been punctured by the Customs authorities to be examined for revenue purposes. Contamination of the contents usually occurs, and if the tins are resealed, as was formerly the practice, decomposition of the milk is likely to develop; by present arrangements such punctured tins are disposed of for immediate consumption of the contents.

The short section of the report on local arrangements for meat and food inspection is largely concerned with the still prevailing evil of small private slaughterhouses. Sunderland is singled out among large towns for disapproving mention; it appears that this town contains no fewer than 140 private slaughterhouses, of which it is remarked that the majority were wholly unfitted for the purpose of slaughtering, nearly 100 being in unduly close association with dwelling-houses, while in 29 slaughtering took place practically in the same room as that in which the retail trade of the butcher was carried on; in thirteen instances the slaughterhouse was also used for the manufacture of sausages and other prepared meats—a practice which is described as specially dangerous on account of the risk of contamination of the meat by infectious matter of intestinal origin. The Town Council obtained powers so long ago as 1885 to prohibit slaughtering, except on premises provided, registered, or licensed by the Corporation, but these powers have not been utilized. The Board has taken steps to press on the Council the necessity of adequate reform in regard to this matter.

The work in relation to the Sale of Food and Drugs Acts includes investigations connected with a number of food substances; cases are also mentioned in which

the Board has made representations to local authorities to ensure a more efficient application of the Acts. Thus in one county it was found that four police officers act as the sampling officers, each within his own division of the county; in each division the whole of the samples taken during the year were collected in a single quarter, and were usually all taken on one day, or two or three consecutive days. It is remarked that the time when sampling was due, and the fact that it would be followed by a long period of inactivity on the part of the sampling officers, could hardly fail to be known throughout each division; while a further disadvantage lay in sending a large number of miscellaneous food samples to the public analyst at one and the same time, especially in view of the limited time within which the law requires that the analyst's report must be made. In other cases it was found that the samples taken annually consist of a considerable variety of single specimens of different articles of food, collected practically at random by the sampling officers concerned; experience seems to show, however, that it is usually much more advantageous to concentrate attention from time to time on particular forms of adulteration, obtaining reports from the public analyst on a series of samples collected with special reference to the question under consideration.

The report contains a record of much useful work, attended with a good measure of success, but affords ample evidence that more remains to be done. One of the most satisfactory features is the indication that the enforcement of regulations such as those dealt with not only has the effect of stopping large quantities of unsound or impure food which has started on its commercial career from passing into consumption, but, by its moral effect on the producers or exporters, prevents a much larger amount from being put forward at all, or ensures such precautions being taken in the first place that food of proper quality and condition is produced. Many instances of this sort of preventive effect are mentioned incidentally; a single one may be quoted. In Hull and Newcastle, in spite of the existence of a large number of slaughterhouses, "the detection and proper disposal of diseased meat are effected systematically and on a considerable scale. This result has been brought about in large measure through the butchers having come to realize, on the one hand, that if all information is given to the authority on the discovery of diseased or suspicious meat, they will receive assistance and incur no risk of prosecutions; and, on the other hand, that attempts to trade in unsound or diseased meat will be rigorously dealt with."

ORIGIN OF THE VERTEBRATES.

ABOUT two years ago Dr. Gaskell published in book form the results of many years of patient and brilliant research into the difficult and vexed question of the origin of vertebrates. With the main lines of his arguments the zoological world had been made familiar by the publication of a series of papers.[1] Dr. Gaskell, in his book developed these arguments and added much that was new. His views had not been received with much favour; indeed it may be said that they met with scant recognition. The review of the *Origin of Vertebrates*,[2] which appeared in this JOURNAL, concluded with these words: Dr. Gaskell "has thrown down the gauntlet; it remains to be seen who will accept the challenge." The challenge has been accepted and the Linnean Society devoted two nights to a full-dress debate upon this interesting topic, and the contributions made by the various speakers have been collected and published *in extenso*.

It may be well to recapitulate Dr. Gaskell's main thesis, though no mere brief statement can do justice to so wide a theme. He holds that the ancestors of the vertebrata are to be found among the palaeostraca, extinct arthropods which formed the dominant invertebrate group in the Silurian period, the period at which the vertebrata arose. The nearest living representative of these extinct forms is *Limulus*, the king crab. Ammocoetes, the larval form of the lamprey, is regarded as the vertebrate which offers in its anatomy the most important clues to the phylogeny of the vertebrates. The unfolding of the story is, therefore, to be found in the detailed comparison of the two forms, organ by organ. In the ventricles of the brain and central canal of the spinal cord, Dr. Gaskell sees the stomach and intestine of the arthropod, the infundibulum being the relic of the invertebrate gullet. The alimentary canal, as such, being thus rendered unavailable, a new gut had to be evolved, and this, in Dr. Gaskell's opinion, is deducible from the limuloid respiratory system. This represents, imperfectly it is true, the central point of the argument. Dr. Gaskell supports his case with an amazing wealth of detail, the outcome of much labour and a wide and intimate knowledge of the literature, which can but excite the admiration of his keenest opponents. The problem is attacked from every standpoint—morphological, embryological, physiological, and palaeontological. To appreciate fully the grasp Dr. Gaskell has obtained of the subject in all its details, the book itself must be read. It may safely be said that, with the exception of Sir E. Ray Lankester, not one of Gaskell's critics has anything approaching his intimate knowledge of the subject in all its aspects. They can only pass judgement from the standpoint of "general principles." This came out very clearly in the Linnean debate.

Though, with the exception of one physiologist—Professor Starling—all who took part in the debate were well-known zoologists, the contributions made to the discussion were of very unequal value. The attack, for many of the speakers held views adverse to Dr. Gaskell's theory, was led by Professor MacBride, whose "first and most fundamental objection is to the whole nature of Dr. Gaskell's 'morphological reasoning.'" Professor MacBride is conservative, and takes his stand on precedent; for him morphological reasoning must "conform to precedent"—it must obey certain canons based on the germ-layer theory.

With this point of view scientists may agree in a general kind of way, but the firmness of their convictions will vary, in part according to the nature and influence of their scientific training and in part to their own temperament, for there is no doubt that there is much truth in the Gilbertian statement that every one is born "either a little Liberal or else a little Conservative." Professor MacBride is one of the distinguished group of zoologists who have acquired their training and mode of thought in the great school of embryology at Cambridge, founded by F. M. Balfour; he therefore naturally clings to the morphological value of the germ layers. This

[1] The majority appeared in the *Journal of Anatomy and Physiology*.
[2] BRITISH MEDICAL JOURNAL, December 12th, 1908, p. 1751.

furnishes the main line of his attack, and he cites numerous instances in support of his views.

Mr. E. S. Goodrich, of Oxford, a brilliant and rigid morphologist, was also in opposition. He, too, will recognize no arthropod, however dominant, as an ancestor. From the known vertebrate characters he proceeds to build up a hypothetical ancestor which ought, in his opinion, to possess certain characteristics, and until such an ancestor is forthcoming he will disown all others—"he won't be happy till he gets it." Such a line of argument fails, as it seems to us, to carry conviction. Indeed, it is a method of argument which is scarcely in keeping with the true scientific spirit. However great the present knowledge of morphological detail, the keenest enthusiast will not venture to assume that we have reached anything like finality, and to postulate dogmatically certain anatomical requirements for the hypothetical vertebrate ancestor from imperfect knowledge is surely "begging the whole question.' How often do we find scientific discoveries to be "contrary to expectations"? No suggestion was advanced as to how such essentially vertebrate structures as the notochord may have originated.

A remark made during the discussion by Sir E. Ray Lankester seems to afford a just criticism of Mr. Goodrich's line of reasoning. Sir E. Ray Lankester said that Dr. Gaskell's theory "was a matter not to be treated as *a priori* impossible or improbable," but the question simply was, "Are the facts brought forward by Dr. Gaskell such as to make it appear probable that the vertebrates have developed from arthropods, resembling *Limulus* by the conversion of the old alimentary canal into the neural tube and the simultaneous formation of a totally new digestive tract?" Sir E. Ray Lankester's contribution to the discussion was, as one would expect from him, essentially judicial. It reminds one of the summing-up by a judge after the hearing of a difficult case, involving numerous technicalities, before submission to the jury. His verdict is "that the coincidences cited by Dr. Gaskell were not of a sufficiently exact and special a nature." The impression left upon the mind, after a perusal of Sir E. Ray Lankester's remarks, is that he is unconvinced but that he still regards the matter as being *sub judice*.

Professor Dendy applied himself mainly to a criticism of Dr. Gaskell's interpretation of the structures met with in the lateral and median (pineal) eyes of the arthropods and of the vertebrates. With the interpretation advanced Professor Dendy does not agree.

Dr. Smith Woodward naturally dealt with the palaeontological evidence. He agreed with Dr. Gaskell's line of argument, that "during the subsequent course of evolution of the vertebrates themselves, each successively higher group became the dominant type for the time being; and that each advance was due to evolution from the immediately preceding dominant type." He also states that, "although so little is known of their organization, it seems probable that the Ostracoderms are lower in rank than the true fishes, and most nearly related among surviving animals to the Marsipobranchs. Dr. Gaskell has added to this probability by his researches on the Ammocoete." Dr. Smith Woodward does not, however, agree with Patten's interpretation of the appendages in Cephalaspis, which he regards as merely scales. "Palaeontology affords no clue to the ancestry of the vertebrates, because they seem to have originated as animals with no hard parts capable of fossilization." Such is the statement made by Dr. Smith Woodward. From the printed abstract of Dr. Woodward's remarks—which we presume he personally supplied for publication—it is difficult to form an opinion as to whether he is to be regarded as a decided opponent to the theory. It is from the remarks made by Dr. Gaskell in reply that one is able to glean that Dr. Smith Woodward raised certain difficulties, which appear to be matters of opinion rather than of fact, as to the zoological position of the scanty remains of certain Ostracoderms.

So much for the destructive criticism. Let us turn to the views of some of the supporters of Gaskell's hypothesis. Dr. Gadow, one of our most distinguished vertebrate morphologists, is "whole-hearted." He regards Ostracoderms as the lowest known vertebrates, closely approached by an early reconstructed vertebrate. Amphioxus is not, in Gadow's opinion, in the line of descent, "and the claims of the other chordata restrict themselves to a few features of doubtful value." Gadow strongly approves of Gaskell's explanation of the chorda, and lays stress on the absence of nerves or blood vessels in it, and though of endodermal origin it is not a glandular structure.

Professor Stanley Gardiner pointed out that Dr. Gaskell's critics had devoted their energies to the work of destruction. The alternative line of descent is through Amphioxus, but no one attempted to show how this animal had arisen. Amphioxus is a typical example of regression. He drew attention to the extraordinary "series of analogies and probabilities," and to the confusion resulting from the application of the germ-layer theory to the vertebrates.

An interesting contribution to the discussion was made by Professor Starling, who justly claimed that a physiologist has quite as much right to be heard on questions involving the principles guiding phylogenetic researches. Professor Starling is entirely at one with Dr. Gaskell in regarding the central nervous system as of the greatest fundamental importance in dealing with the question of the evolution of the vertebrata, the muscular, digestive, and respiratory systems showing no continuous rise in type. "I am convinced," says Professor Starling, "that the principles on which he (Dr. Gaskell) has proceeded are the only ones which will lead to a solution of the problem."

It is not possible to pronounce a decided verdict it may safely be said that no one has studied the question so completely or so thoroughly in all its bearings, and with so full a knowledge of the vast literature, as has Dr. Gaskell himself. There are relatively few facts to go upon; much is a matter of interpretation. That there are difficulties—such as the formation of an entirely new alimentary canal—Dr. Gaskell will, we think, readily admit. Morphological details and analogies may be questioned, but it is not upon details that the hypothesis will stand or fall. It must be judged as a whole, and upon broad general principles; from that point of view Dr. Gaskell has, we think, attained a measure of success. That he approached the subject from a physiological as well as from a morphological standpoint is of great value, and it is to be hoped that all questions of a like nature will be so dealt with. We are by no means in agreement with the modern tendency to regard morphology as dead, but pure details of structure without reference to function cannot lead to lasting results. The study of the comparative physiology of the lower animals is what is most needed at the present time. Much of Dr. Gaskell's evidence has also an embryological basis. Is it not time to overhaul the

hard and fast conceptions with regard to the germ layers? It is not so long ago that the botanists believed as firmly in the plant germ layers as do many zoologists of to-day in the animal germ layers, but now these beliefs have been thrown over. Professor Stanley Gardiner touched upon this question, and it requires fuller consideration.

Whatever may be the judgement of the future, morphologists and physiologists alike must recognize that Dr. Gaskell has produced a work of a most stimulating character, full of suggestion for future research, and a lasting monument to his knowledge, patience, and industry. The verdict of to-day may be the Scottish one of "non-proven"; but the question is still an open one. The opinion left by a careful perusal of this discussion is that Dr. Gaskell has strengthened rather than weakened his position.

THE HYGIENE EXHIBITION AT DRESDEN.

Elsewhere we publish a letter from the British Executive Committee of the International Hygiene Exhibition which is to be opened at Dresden in May next. It refers to an appeal issued by the Committee, and signed by Sir Thomas Barlow, Chairman; Lord Ilkeston, Treasurer; Sir William Bennett, Mr. Henry T. Butlin, Sir William Church, Mr. J. M. Cotterill, Mr. Andrew J. Horne, Dr. W. Allan Jamieson, Dr. D. N. Knox, Sir John Lentaigne, and Sir Thomas Oliver, Vice-Presidents; Professor Sims Woodhead, Chairman of the Finance Subcommittee; Sir Lauder Brunton, Mr. George Cadbury, Sir William J. Collins, Professor Sheridan Delépine, Professor Harold B. Dixon, Dr. Gilbert J. Fowler, Mr. T. C. Horsfall, Mr. W. H. Lever, Sir Norman Lockyer, Mr. Arthur J. Martin, Sir Shirley F. Murphy, Sir William Ramsay, Sir Henry E. Roscoe, Professor Arthur Schuster, and Mr. Charles Stevenson, Secretary of the Manchester District Peace and Arbitration League. These names are in themselves a sufficient guarantee, alike to the medical profession and to the public, that the Exhibition is not intended to be a mere show, but has a serious scientific and philanthropic purpose. In the appeal it is stated that Germany is expending £500,000 on the Exhibition, while France, Russia, and other European Governments have voted sums of from £10,000 to £20,000, and Japan as much as £35,000. Even China, Peru, and Brazil, are erecting national pavilions. The committee has received promises of important exhibits from the Metropolitan Asylums Board, St. John Ambulance Association, the health departments of various corporations, the schools of tropical medicine, and many other public and private institutions, all illustrative of modern progress in the conflict of man with his environment. To house these exhibits in a suitable pavilion and to provide for their transport and supervision a sum of at least £10,000 is needed. This sum, moreover, must be found at once, or the pavilion cannot be built and equipped in time.

The objects of the Exhibition have been set forth more than once in the British Medical Journal, notably in articles published in the issues of August 13th and November 19th, 1910. In these it was pointed out that although the invitation of the German Government to take part officially in the Exhibition was accepted by all the principal civilized nations of the world, Great Britain obstinately stood aloof. Whatever may be thought of "splendid isolation" as the proper attitude of this country we have no hesitation in saying that in this particular instance it is both ungracious and impolitic. We have already said that the refusal of our Government to recognize the Exhibition lends itself to a possible misunderstanding, and we showed by a quotation from one of the leading and most moderate organs of opinion in Germany that in that country it had in fact been construed as a manifestation of unfriendly feeling. The Government, true to the unhappy traditions of British policy, will do nothing in furtherance of the objects of an exhibition which is purely scientific and humanitarian, without any tinge of commercialism. Science, even when its direct aim is the welfare of mankind, commands no votes, and is therefore held as of little account by politicians. It is they who have placed Great Britain, the "sapient nurse" of hygiene, in the position of appearing either indifferent to the progress of the eminently practical branch of knowledge with which British science is so intimately associated, or blinded by national jealousy to the importance of a thing which concerns the welfare of our own as well as all other countries.

The Dresden Exhibition will be an object lesson on an unprecedented scale in all that helps to prevent and exterminate disease and to promote health. Its international character gives it an altogether exceptional interest and importance. At the present day, when ways of communication between the most distant parts of the earth are so many and so easy, no nation can safely hug itself in a fancied security against invasion by disease. Has not plague quite lately somehow found its way through our sanitary ramparts? And is not cholera threatening us from various points? It may be added that a solidarity of nations in the struggle against the common enemies of the human race would do more to prevent war than any number of futile conferences. This consideration alone should be sufficient to gain for it the active sympathies of the many earnest spirits who are striving to establish the reign of peace throughout the world on the permanent basis of a community of social aspiration.

It is with the object of counteracting as far as possible the effects of the short-sighted action of our Government that the Executive Committee has appealed to the people of Great Britain. The sum asked for is a trifle compared with the gifts that men burdened with superfluous wealth make every day for much less beneficent purposes. Already subscriptions to a considerable amount have been received. In addition to the sums mentioned in the letter, we are informed that the Merchant Taylors have given 100 guineas, and that the Lord Mayor has authorized the use of his name in an appeal to other City companies. Members of the medical profession, to which hygiene owes its being, are not as a class wealthy, but they are lovers of their kind, and are eager to aid in the diffusion of knowledge which tends to the preservation of health. We are sure, therefore, that an appeal for help in so good a cause as that of which the Dresden Exhibition is a symbol, will not fall upon deaf ears. We still cherish the hope that wealthy philanthropists will be awakened to the significance and far-reaching importance of the undertaking from a national as well as from a scientific point of view, and will come forward even at this last moment to save this country, which is the birthplace of hygiene, from the false position in which it has been placed by the ignorance or apathy of those who, it might fairly have been hoped, would have helped to place it in the forefront.

LIVERPOOL SCHOOL OF TROPICAL MEDICINE.

ON Saturday, January 21st, the twenty-seventh Expedition of the Liverpool School of Tropical Medicine sailed for Gambia and Senegal, where it is to investigate sleeping sickness. The members of the expedition are Professor J. L. Todd, Dr. Wolbach, and Mr. Ernest D. Todd. On the previous evening a dinner was given by Mr. W. H. Lever, chairman of the school. In giving the toast of the evening he said they had every reason to feel proud of what the school had done in regard to tropical disease. The present King of the Belgians took a great interest in the movement and recognized its paramount importance. The Liverpool School had raised nearly £100,000 for the investigation of tropical diseases. The methods by which the Government approached this subject did not commend itself to any who gave scientific attention to this matter. The Liverpool School was advocating measures to prevent disease and to make the tropics the healthiest parts of the world. It was a greater thing for the governor of a tropical State to look after the cleanliness of the town in which he was stationed than to lead a punitive expedition to butcher niggers in the bush. They were entitled to all the help home Governments could give them. If they got adequate help, they would get thousands per cent. on whatever they did in the trade of the country and the progress of the empire. The loss to the port of Liverpool, as well as to the whole empire, in trade from West Africa was more tens of millions than he dared tell them. He was certain that all this could be avoided if the West Coast were rendered thoroughly healthy, and if people could go out there free from invalidity and sickness. Statistics showed that the United States lost from insect bites alone a sum that represented £1,000,000. Our own Government, instead of dawdling, ought to make every use of the knowledge gained through the school's research. They had freed the black man from slavery, but they had left the white man to the most cruel form of slavery—ignorance, disease, and death. Professor Todd, in reply, said that the subject of tropical medicine was important not only to Great Britain but to the world. Dr. Wolbach said he desired to pay a tribute from Harvard University as to the work that the school was doing in the way of tropical research. The aim of the present expedition was either to verify or disprove the at present accepted theory with regard to sleeping sickness. Sir Edward Russell proposed the toast of "Commerce and Medical Science," which was acknowledged by Sir Owen Phillips, K.C.M.G., Vice-President of the school. Sir Rubert Boyce, who also responded, appealed to merchants to use some of their wealth to come to the help of their scientific brothers. If they put in a little more brain power, they could make West Africa as healthy as any other part of the empire, and he strongly appealed for money to carry out these ideas. Professor Ronald Ross also pleaded for more workers and for increased support.

THE BIOSCOPE AND BACTERIOLOGY.

A LARGE gathering of members and their friends, including a number of medical men, assembled at the Camera Club on the evening of January 19th to witness a demonstration by Dr. E. Ofenheim of cinematograph films taken by Dr. Levaditi, of the Pasteur Institute, Paris, illustrating the movements and different phases in the life-history of living micro-organisms. In introducing the lecturer, Mr. R. T. Watkin-Williams, chairman of the council of the club—who, in the absence of Lord Crawford, presided at the meeting—stated that the exhibition was the first to be given in London before an audience not wholly consisting of medical men. Dr. Ofenheim introduced his subject with a brief explanation of the composition and physiology of the blood, enlightening the non-professional portion of his audience with three sets of moving films depicting human blood as seen ordinarily on a slide, the circulation through the web of a frog's foot, and the phenomenon of phagocytosis. He then proceeded to show rolls of films illustrating the spirillum of relapsing fever, including a wonderfully vivid picture of the process of agglutination, the spirochaete of Vincent, the *Spirochaeta pallida* and the trypanosome of Lewis. Of these the *Spirochaeta pallida* furnished the most interesting and the most extraordinary series. The photographs had been taken from smears of the cornea of a syphilitic patient. To one who has seen Schaudinn's organism under the microscope only after much diligent search fortified with the eye of faith, these films were a wonderful revelation. Here one saw swarms of them wriggling about all over the field, and in all sorts of strange shapes. Another very striking picture was one showing the blood of a rat infected with the trypanosome of Lewis shortly before death, absolutely packed with organisms far exceeding in numbers the erythrocytes. This concluded the photomicrographic portion of the demonstration, and it can only be described as marvellous. The clearness of detail was almost uncanny, and when we consider the difficulties which have to be surmounted to obtain even an ordinary photomicrograph of these organisms success in procuring a series of cinematographic views is really an astounding feat. As Dr. Ofenheim pointed out, the cinematograph should prove an invaluable aid to the bacteriologist in tracing out the involution forms and methods of reproduction in these organisms, inasmuch as by its means it is possible to record movements too rapid to be properly appreciated by the human eye. Dr. Ofenheim next proceeded to show a very instructive roll of films illustrating the movements of the stomach as seen under the x rays after the administration of a bismuth meal. This also was a most interesting exhibition, though less novel than its predecessors. The waves of peristalsis passing downwards and the opening and closing of the pyloric ring were very clearly visible. Some excellent bioscopic representations of the axolotl, the remarkable animal which has gills permitting it to live under water and lungs wherewith to breathe when on dry land; and of the scorpion and its method of using its deadly sting, concluded the demonstration. A brief discussion followed, and a reply by Dr. Ofenheim brought the proceedings to a close. The Camera Club has every reason to congratulate itself upon a most interesting entertainment, and they were fortunate in obtaining the services of so able and lucid a demonstrator as Dr. Ofenheim, whose explanatory remarks, if we may be permitted to say so, could not have been more clear and precise had they been couched in his native language. The films themselves are the most perfect of their kind, being absolutely free from blurs and blotches and the irritating oscillations so frequently seen in cinematograph pictures; the total number of pictures shown covered no fewer than 2,599 ft. of film. They proclaim alike the genius and the skill of Dr. Levaditi, whom it would be an impertinence to praise. Lastly, every credit is due to Pathé Frères for their enterprising public spirit in producing the pictures for the benefit of the public. It is, as one speaker remarked, but one more example of the public devotion to science found in France and so lamentably lacking in certain other countries.

"IN GOOD FAITH AND WITH REASONABLE CARE."

IN the annotation published last week (page 156) under this heading we forbore to comment on a statement made by Lord Justice Fletcher Moulton in the course of the judgement (reported in full at page 174), because the exact signification attaching to what he said was not very clear. He said: "it is quite true that mere want of good faith in the ordinary sense of the word, perhaps, does not coincide with the legal issue of good faith. It is possible you may act, although with the best intentions, in a way in which legally you would be held to be guilty of want of good faith." The exact meaning to be attached to these words, as we have said, is not clear. Looking at the matter from the ordinary layman's point of view we should have assumed that this point was covered by the words "with reasonable care." With regard to the signification to be attached to the words "good faith," we note that in an article in the *Journal of Mental Science* (October, 1891), on the protection of medical men by the English lunacy law, by Mr. Wood Renton, barrister-at-law, the author, in dealing with "good faith," said the words "want of good faith" have no technical legal signification, but are to be taken in their ordinary acceptation, and mean simply want of honesty in belief, purpose, or conduct. The old fallacy that asserted the existence of a distinction between legal and moral fraud has now been swept out of the region even of forensic argument, and a strong reaction against metaphysical subtleties has set in. Mr. Wood Renton quotes a case in which Mr. Justice Stirling, in regard to imputed fraud about a patent, said: "it would be wrong in judgement to construe such a word (fraud) in an Act passed little more than three years ago and in the absence of a context imperatively demanding such a construction, otherwise than in accordance with the ordinary meaning of the English language, and consequently involving dishonesty or grave moral culpability on the person demanding the patent." If we replace "patent" by "lunacy order," we can discern at once the position in which any person taking steps with a view to signing or carrying out a lunacy order would be placed, if by chance a failure of the legal bona fides were proved. Anything like a finding of want of good faith would at once destroy the confidential and responsible position which a medical man has so often to take up in dealing with the medico-social affairs of a family when they are referred to him. He could not well seek to protect himself by explaining to all that his error was technical and not of a moral nature. Mr. Justice Wills spoke yet more plainly in another case about the use of the term "fraud" in a non-natural sense. He said: "Fraud is a term that should be reserved for something dishonest and morally wrong; and much mischief is, I think, done as well as much pain inflicted by its use where 'illegal' and 'illegality' are the really appropriate terms." It is true that "fraud" is a harsher form than "want of good faith," but the two terms in essence come to the same thing, and in the delicate work that a doctor has often to do, either would be a fatal imputation. Though the chances of either being used with the authority of a court are perhaps small, the effects would be so important that while the danger of such use exists there can be no permanent feeling of security. Obviously there is difference of opinion even among the highest judicial authorities, and until it has been set at rest no one can say in which way the all-important initial view of good faith in a particular case formed by the judge of first instance will reveal itself. We cannot attempt here to indicate what should be done to make straight the crooked ways, but the medical profession has the right to claim that the fulfilment of those duties which are imposed on it by the law shall not be subject to the sport of the law itself.

BACTERIA IN MEAT.

THE possibility of bacterial infection of apparently sound meat from animals in prime condition is a matter of considerable importance in the interests of public health. The subject was first investigated little more than two years ago by Gaertner, who found that normal flesh from healthy animals might present bacteria even within three days after death, but they were entirely confined to the surface and by the end of ten days they had not penetrated more than half an inch into the interior. Similar results were obtained by Forster, who found that the interior of of the meat was quite germ-free. It was, therefore, concluded that healthy meat was free from bacterial infection in its interior, and that bacteria would only be met with there when there was an infective focus in some other organ. This opinion soon required modification; Conradi, by using an enrichment method of culture, was able to demonstrate the presence of bacteria in the interior of meat from a considerable percentage of sound carcasses. This result, confirmed by Mayer and Rommler, is of importance in the bacteriological inspection of meat, and necessitates the proviso that the presence of bacteria in the interior of flesh is no certain indication of a diseased condition. Further confirmation of this fact is afforded in a recent communication[1] by Dr. Alfred Horn, of Leipzig, who has investigated the matter in both healthy and diseased animals. Using the enrichment method as well as the ordinary method, he has been able to show that, although the percentage of positive results is decidedly higher by the first method, a certain number of cases may be detected by the second. Thus in carcasses examined within twenty-four hours after death, the percentages of positive results were respectively 14 and 5.5; from three to six days after death the figures were 31 and 15, while up to 21 days after death 54 per cent. and 25 per cent. respectively of cases gave positive results. In the case of animals in which some marked septic condition was found, the figures do not show any notable difference. Over sixty examinations of such carcasses were made, in every case within two days after death, and the percentage of positive results was 31 by the enrichment method and 21 by the other. It is thus evident that bacteria are as likely to be found in the flesh of healthy animals as of diseased. The bacteria met with were for the most part cocci, although Gram-negative rods of the *coli* type were found in a considerable proportion of the cases, while anaërobic organisms also occurred not infrequently. It is, perhaps, unfortunate that Dr. Horn did not attempt to characterize these bacteria further, but, on the other hand, he makes the definite statement that no typical members of the food-poisoning group were present on any occasion. After investigating the effects of the method and circumstances of killing and the means of packing and transport, he comes to the conclusion that these exert a considerable influence on the bacterial contamination of meat. This is especially the case where, on account of disease, the animal has to be killed on the farm under the worst possible conditions, and where the intestine and its contents are allowed to remain in the carcass for a much longer time than is the case in a public slaughterhouse. As a further point of importance, he insists on the bacteriological examination of the

[1] *Zeitsch. f. Infektionskrankh. der Haustiere.* Bd. viii, Heft 6 pp. 424–437.

spleen in all cases where disease is known or suspected. The importance of this lies in the fact that the spleen is a natural breeding ground for micro-organisms, and that in the event of a generalized septicaemic condition it is more likely to show the presence of bacteria than the muscles. In investigating this matter he examined over 200 animals in which some septic condition was present. The bacteriological examination of the spleen and muscles gave an identical result, either positive or negative, in three-quarters of the cases. In 9 per cent. the spleen was sterile while the muscles were infected. Here Dr. Horn considers that we have to deal with a *post-mortem* invasion from the exterior, for it is not to be imagined that in a generalized infection the spleen would be entirely unaffected. On the other hand, 17 per cent. showed the spleen positive and the muscles negative, and in such cases he thinks it advisable that a further and more exhaustive examination of the muscles should be made. This opinion and recommendation was previously advanced by Müller in 1909.

CAESAREAN SECTION.

THE January number of the *Journal of Obstetrics and Gynaecology of the British Empire* consists of the complete report read by Dr. Amand Routh at the St. Petersburg meeting of the International Congress of Obstetrics and Gynaecology in September, 1910, on Caesarean section in the United Kingdom. The report contains tables of 1,282 cases of Caesarean section by over 100 obstetricians and gynaecologists of the United Kingdom who were living on June 1st, 1910. The tables will be of standard value, as Dr. Routh has taken great pains to ensure accuracy. He only included cases in which the operators were obstetricians, gynaecologists, and surgeons on the staff of a maternity or gynaecological hospital, and he has felt obliged to exclude several distinguished authorities who are at present living in retirement and have not been able to collect all their cases. Many more cases are excluded, owing to the recent death of the operators, as complete reports could not be obtained. Drs. Cullingworth, Horrocks, Rivers Pollock, Taylor, Walter, and Edgar come within this category. It is, indeed, instructive to compare Dr. Routh's monograph with the last standard British work on the same subject, Dr. Thomas Radford's treatise, *On the Caesarean Section*, the last edition of which appeared over thirty years ago. It included important tables of cases recorded by British and Irish obstetricians, but it was impossible in earlier days, down to the Sixties or Seventies, to obtain reliable clinical reports. Radford set an admirable example, and, thanks to the great advance in aseptic technique in the operating theatre and sick room, and to the higher tone of obstetrical education in the medical schools of the British Isles, Dr. Amand Routh has succeeded in collecting records which are sufficient to prove that British operative midwifery has more than held its own during the present generation. Dr. Routh's analyses of his tables further show how obstetric surgical science is now cultivated in our schools. The question, for example, of the sterilization of the patient on whom Caesarean section is performed is very grave, and as Dr. Routh's tables prove, it has not yet been settled.

SLEEPING SICKNESS CONFERENCE.

A CONFERENCE on sleeping sickness, held at the Foreign Office during the last few days, has just concluded its deliberations. The conference was convened by the British Government in consequence of representations made as to the danger of the spread of the disease as a result of the construction of the Rhodesia-Katanga Railway, which runs from the north of Broken Hill to the Congo frontier and beyond. The delegates were M. Melot, representative of the Belgian Government; Dr. van Campenhout, of the Colonial Office in Brussels; Dr. Sheffield Neave, representing the Rhodesia-Katanga Railway; Dr. Aylmer-May, representing the Chartered Company; Dr. Bagshawe, of the Sleeping Sickness Bureau; and representatives of the British, Foreign, and Colonial Offices. According to a message from Reuter's Agency which appears in several newspapers, the conference held that, with regard to the necessary precautions in the case of new railway extensions, it was essential that the route of these lines should be inspected for *Glossina palpalis*, and that maps of the fly areas be prepared; that railways should cross the fly belt at the narrowest points and not follow them; that there should be no station, buildings, or stopping-places in the *Glossina palpalis* area, and that labourers on the railways should be recruited under such condition as to avoid infection. It is also recommended that during construction a span of a hundred yards shall be cleared on either side of the line and for a distance of a thousand yards on either side of a river; that clearings shall be made on either side of railway bridges, and that all houses in a fly area shall have a clearing of five hundred yards. During the working of railways it is recommended that there shall be constant supervision and inspection, that passenger carriages, trucks, etc., shall, as far as possible, have openings covered with fly-proof gauze, and that as *Glossina palpalis* probably does not exist south of the Congo-Zambesi watershed, the Rhodesia-Katanga Railway shall be worked in two sections with a view to avoiding the possibility of carrying the fly from one area to another.

TROUBLES IN TRINIDAD.

A LITTLE over two years ago a letter was published from the President of the Jamaica Branch of the British Medical Association, drawing attention to a newspaper crusade then being carried on against a colonial medical officer, Dr. Clare, Surgeon-General of Trinidad. This officer, who had done excellent work while in Jamaica, had recently been placed at the head of the Trinidad Medical Service, and the object of the letter was to throw on the attack being made on him the light supplied by long familiarity with West Indian affairs. It was stated to be well known that if any official did not "stand solid" with the Trinidad press but incurred its enmity, he was pursued with characteristic persistence, no matter how such action might be detrimental to the public interest. A large collection of the papers in question was placed in our possession, and in a comment on the subject we pointed out that the attacks were of an intemperate character, and that their ostensible cause was the fact that Dr. Clare soon after his arrival allowed it to be known that a case of plague had been found, and thereby subjected the island to the risk of being placed in quarantine. A year or so later we began to receive from correspondents in Trinidad itself further copies of local newspapers. These showed that Surgeon-General Clare was again the object of a public attack, but one based primarily on a precisely opposite ground—namely, that he had declined to accept the diagnosis of certain members of his staff with respect to a particular death suspected to have been due to plague, and had contented himself with the precautionary measures locally applied to all cases of infectious disease. Little by little matters developed, and finally the Governor appointed a commission of

inquiry, consisting of six persons. It would be quite impossible to give a detailed account of its proceedings, but their general nature is sufficiently indicated by the following extract from the report of the President of the Commission: "When the whole administration of an officer in the position of the Surgeon-General is subjected to a scrutiny which, though not complete, is yet so industrious and unsparing as that the results of which Mr. Wharton submitted for our consideration quite a number of instances in which the officer's conduct remains to a certain extent in doubt will probably be discovered. To be triumphantly and decisively successful at every point along such an extended line of attack is a result obviously difficult to attain; and where it is shown that the official chief is personally unpopular, so much so that there has been a cessation of social relations between him and his subordinates by reason of extraneous grievances; that some of the witnesses adduced have an intelligible motive to seek to shift their own responsibilities on to him, others are smarting from his censures (even though since cancelled by a higher authority), and the organizer of the whole attack is a friend of the former and a near relative of the latter; where, passion having full sway, exaggeration is rife, and gentlemen of reputation recklessly besmirch themselves in order to injure the object of the common attack: under such circumstances care must be taken not to give undue importance to mere doubts as to the issue of the struggle at a particular point or points. Otherwise it would be impossible to carry on His Majesty's service; officers would be liable to be hounded from office by mere clamour and aspersion and combinations of interested persons." The doubts to which reference is made are as to whether anything was proved against the bona fides and honesty of Surgeon-General Clare's actions, and it is stated that this was not the case. But this is not the only report on the inquiry. Each of the other commissioners submitted his views to the Governor in the form of a criticism of what was stated in the President's report. Of these other reports it need merely be said that they agree more or less whole-heartedly with the President's practical exoneration of Surgeon-General Clare on what may be regarded as the principal issues, and merely differ in the endeavours they varicusly make to protect one witness or another and in the views they express as to the wisdom or otherwise of Surgeon-General Clare's administrative methods. What the final upshot will be still remains to be seen. It rests with the Secretary of State for the Colonies, and we do not envy him his task. Not only are the documents to be studied extraordinarily voluminous, but reconciliation of the interests of public service with fairness to Surgeon-General Clare must, in view of the strong local feeling existing, prove difficult. But there is one conclusion that can be drawn forthwith. If ever an inquiry of this order is really necessary it should be held by an officer having no connexion with the colony in which the inquiry has arisen, and be conducted on ordinary judicial lines; that is to say, the issues to be tried should be definitely fixed beforehand and the evidence taken on oath.

TREATMENT OF INCIPIENT INSANITY.

AT a meeting of the directors of the Dundee Royal Lunatic Asylum held recently a report of a favourable nature was submitted by Dr. Mackie Whyte, Special Physician for Incipient Mental Diseases, Dundee Royal Infirmary, on the experiment of treating incipient cases of insanity in the wards of the Dundee Royal Infirmary. He said that, although the numbers dealt with were comparatively few, the results were, on the whole, satisfactory, and in every case—even the less hopeful—the relatives had shown themselves very grateful for the help the infirmary had been able to give them in circumstances always trying, and often highly perplexing. In no case had there been cause for regretting precipitate certification, and his experience went to confirm the opinion that almost all cases showing signs of mental breakdown should at the earliest possible moment be placed under such supervision and gentle discipline as it was possible to give in the Royal Infirmary.

FRENCH MEDICAL PARLIAMENTARY GROUP.

THE French Medical Parliamentary Group, which comprises fifty-nine deputies and thirty-seven senators belonging to the medical profession, recently met for the election of office-bearers. The following were chosen: President, Dr. Labbé, senator; vice-presidents, Professors Lannelongue, senator, and Dupuisson, deputy; secretaries, Drs. Pedebidou and E. Raymond, senators; and Drs. Lachaud and Laurent, deputies; treasurer, Dr. Devins, deputy. Three subcommittees were appointed as follows: (1) For the reform of medical teaching; (2) for the defence of professional interests; (3) for parliamentary action on matters relating to medicine and social hygiene. Meetings of the group are held once a month.

OWING to the derangement of business due to the threatened strike of printers in London, it has been necessary to postpone the publication of a number of contributions received this week. It is requested that communications intended for publication in the next issue should be forwarded as early as possible.

WE are informed that only one candidate, Dr. Leonard Kidd, was nominated for election as direct representative of Ireland on the General Medical Council, and that Dr. Kidd, who was first elected in 1906, has consequently been re-elected.

THE next International Conference on Cancer will be held at Brussels in 1913. The details of its organization will be settled at a meeting to be held during the International Hygiene Exhibition, which will open at Dresden in May next. Among the matters which it is proposed to discuss are the adoption of an international nomenclature of tumours and the establishment of a uniform system of statistics.

IT is announced that the degree of Doctor of Medicine will shortly be conferred on the German Emperor by the University of Prague. The ceremony will be performed in the Throne Room of the Berlin Schloss by the Rector of the Prague German University assisted by the senior professors of the Medical Faculty. It may be remembered that King Edward VII was a Fellow of the Royal College of Physicians of London and the Royal College of Surgeons of England. Our present gracious Sovereign is a Fellow of the Royal College of Surgeons. The Kaiser is a man of manifold activities, but the doctor's degree which he is about to receive will not, we believe, give him a legal right to practise medicine even on the lieges of his brother Emperor, His Imperial and Royal Majesty, Francis Joseph.

England and Wales.

[FROM OUR SPECIAL CORRESPONDENTS.]

LIVERPOOL.

THE MEDICAL SOCIETY OF LIVERPOOL.

AT the annual general meeting of the members of the Liverpool Medical Institution it was decided to alter the name of the society to "The Medical Society of Liverpool." The society is one of the oldest and most flourishing learned societies in the kingdom, and dates back to 1779, when the Liverpool Medical Library was founded. In 1833 a Liverpool Medical Society was begun, and went on until 1839, when it amalgamated with the Medical Library under the trustees of the building still known as the Medical Institution. It was in 1840 that the society was called the Liverpool Medical Institution. The name met with considerable opposition, and was adopted in a somewhat irregular manner by a small majority. The interest of present members in the history of their society has been awakened by the researches of Mr. T. R. Bickerton, who was President immediately before the present President, Dr. Bradshaw. Mr. Bickerton made the history of the society and of one of its founders, Dr. Rutter, the subject of two very interesting addresses, which have led to the result now chronicled. The society has 419 members and associates, and an income of over £750 a year. The average attendance at the ordinary meetings is 82, which compares well with that of any medical society in the country. The society publishes the *Liverpool Medical Journal*.

GARSTON NEW ACCIDENT HOSPITAL.

The township of Garston, which has recently been absorbed by Liverpool, had a small accident hospital, more especially for cases of accident on the railway and docks. This hospital is to be rebuilt, and a special subcommittee of the Liverpool City Council has decided "that an offer be made, without admitting liability, to the committee of the proposed Accident and Emergency Hospital at Garston and district, to contribute the sum of £5,000 towards the building fund of this hospital."

MANCHESTER AND DISTRICT.

THE RED CROSS SOCIETY.

AT a meeting held last week to establish a division of the Red Cross Society in Pendleton in connexion with the East Lancashire Branch of the Territorial Force, Sir Arthur Heywood presided, and an interesting account was given of the history and objects of the Red Cross Society by Colonel Coates, C.B. He said that the Red Cross Society was really an amalgamation of two other great societies—the National British Society for aid to the sick and wounded soldiers and sailors in war, and the British Central Red Cross Council. The first of these was formed by the late Lord Wantage, and had spent more than £500,000 in sending out additional comforts and hospital facilities in various campaigns. The British Central Red Cross Council came into existence shortly before the South African war. Both these societies did good work during the war, but there was a great deal of overlapping and extravagance, and, owing to lack of proper organization, things went wrong with the supplies sent out. After the war was over, the War Office and Admiralty decreed that, in order to prevent mismanagement in the future, these voluntary societies should only be represented by one society. It took some time for the societies to decide on a representative organization, and it was owing to the tact of the late King that the two societies named joined hands under the name of the Red Cross Society. It had been provided that in future no supplies other than those sent by the official department should be allowed to reach soldiers and sailors in time of war except through the Red Cross Society. In this way charitable effort would be well organized, and there would be less chance of waste of money that had been contributed voluntarily. One of the main objects of the society was to complete the personnel of the Territorial Medical Service. The Territorial Force had regimental medical services, field ambulances, and great hospitals at the base, but no arrangements had been made for the care of the sick and wounded who were being conveyed from the fighting line to the base hospitals. Mr. Haldane decided that this should done on voluntary lines as in various other countries. The Red Cross Society had offered to undertake the work and the offer had been accepted. Explaining the working of the society, Colonel Coates said there was a Central Executive Committee in London which in times of need would be in close communication with the War Office and the Admiralty as to the best methods of distributing the supplies raised by charitable effort. Branches of the society had been formed in every county of England, and Lancashire had two branches—the East and the West Lancashire Branches. The affairs of the East Lancashire Branch were managed by an executive committee in Manchester, and the area administered by this committee was divided into districts, of which Pendleton was one. People might become associates and adherents by certain subscriptions, but what was wanted was workers for the various detachments. In the event of their services being needed they would not be called upon to serve outside their own district, but they might be able to render most valuable services in regard to local medical and hospital arrangements for the sick and wounded until they were conveyed to the hospitals at the base. At the close of the meeting many members of the audience came forward and gave in their names as adherents and workers.

BIRMINGHAM.

THE WORKHOUSE INFIRMARY.

THE guardians have decided to provide pathological, bacteriological, and *x*-ray departments for the Birmingham Workhouse Infirmary. The immediate outlay on the pathological department will be £170, while as regards upkeep the salary of a pathologist will be £250 a year, and it is estimated that £50 annually will be required for apparatus, etc. With regard to the *x*-ray department, the apparatus is estimated to cost £250, and the room, including the cost of bringing in the cable, £392.

BIRMINGHAM MATERNITY HOSPITAL.

The medical report for 1909 shows that the district midwives attended 1,680 cases of labour. The total number of children born was 1,697. Of the infants, 45 were stillborn, and 19 died within ten days of birth, so that the total infant mortality was 64, or 3.7 per cent. There were no maternal deaths. The maternity hospital contains eight beds for the complications of pregnancy, sixteen lying-in beds, and one isolated bed. The total number of patients admitted was 379, and of these 7 died as the result of: Eclampsia, 2; *ante-partum* haemorrhage, 2; Caesarean section, phthisis, and rupture of pregnant half of rigid uterus at full term. There were 287 deliveries, and in them the presentations were as follows: Vertex, 258; breech or foot, 13; face, 1; transverse, 11; complex, 3; and unknown, 1. Of the babies, 247 were born alive, but 14 of these died, so that the infant mortality was 5.6 per cent. The routine method of artificial feeding was to give good cow's milk, sterilized, and undiluted. To healthy babies the amount given for each feed was that which experience showed was an average breast-feed for the age. Each feed was placed in an ordinary 6-oz. bottle, and sterilized by standing in boiling water for forty-five minutes. When the feed was required a rubber teat was put on and the baby took it direct from the bottle. Any dilution or additions ordered for special cases were made before sterilizing. When a baby who was receiving cow's milk left the hospital, the mother was given instructions and shown how to sterilize the milk in a bottle or saucepan. All the mothers of babies were invited on discharge to bring the baby to be weighed at the hospital and inspected by the house-surgeon at regular intervals afterwards.

LONDON.

THE PUBLIC HEALTH IN 1909.

(*Continued from page 160.*)

PART I of Sir Shirley Murphy's report to the London County Council for the year 1909,[1] which referred to the vital statistics of the administrative county, was dealt with on pages 159 and 160 of the BRITISH MEDICAL JOURNAL. The second portion of the report refers more particularly to administrative and executive action of the county and borough councils, although it is at times a little difficult to tell from the information given whether in particular instances the control is in the hands of the County Council or of the borough councils.

Dairies, Cowsheds, and Milkshops.

The number of cowshed premises in London is steadily decreasing. In 1894 there were 446, and in 1909 only 214. The greatest number is in Stepney, where there are 36, and in Holborn there is only 1. The amount of inspection appears to vary considerably in the various districts. The Holborn premises are apparently inspected weekly, whereas those in Lambeth and Stepney are inspected on an average twice in each year. The same disparity of inspection occurs with regard to milkshops, of which there over 9,000 in the whole county. The 555 Lambeth premises were each inspected once during the year, and the average number of inspections of each of the 302 premises in Shoreditch was 11. The periodical inspection of cows in the London cowsheds by the County Council's veterinary inspector with a view to the detection of tuberculous disease of the udder, which has been carried on for ten years, was continued in 1909. The results obtained at the five inspections in that year are rather disquieting.

Although the number of cows examined was approximately the same as in 1908, there were found to be 28 of them affected with tuberculous disease of the udder, compared with 16 in the former year. The 28 cows were slaughtered, and the carcasses destroyed, compensation being paid by the Council to the owners. Samples of milk to the number of 2,325 were taken by County Council inspectors from churns of milk consigned from the country to the various London railway termini, and submitted to the Lister Institute for bacteriological examination. There were found to be tuberculous 10.4 per cent. In 1908, of the 620 samples examined 11.6 per cent. were tuberculous. The farms from which tuberculous milk was consigned were visited in 16 different counties, and 11,004 cows were examined, clinical disease of the udder being observed in 219 instances. Outside London the proportion of tuberculous cows shows an improvement in 1909 on previous years. Farmers appear to be disposing of their older cows, and this may account for the improved condition.

Slaughterhouses.

The slaughterhouses, like the cowsheds, are decreasing in number. In 1894 there were 506, and in 1909 only 264. Islington has the greatest number, 34; in Holborn there is only one, and there are none in Westminster. The seven Paddington slaughterhouses were inspected on an average 70 times during the year, whereas those in Lambeth were subjected to a half-yearly inspection.

Offensive Trades.

In the whole of London, with the exception of those in the markets under the jurisdiction of the City Corporation, there are 84 offensive trades. During the year 1909 the County Council instituted proceedings against a firm manufacturing oleo, an edible article, for establishing anew the business of a tallow melter. The magistrate decided that the business was not that of a tallow melter, and the Council then sanctioned it as that of a fat melter.

[1] Report of the Public Health Committee of the London County Council—submitting the report of the medical officer of health for the county for the year 1909. London: P. S. King and Son. No. 1,395; pp. 108, with 6 appendices. (3s. 6d.)

Smoke Nuisance.

In June the County Council had under consideration a report by the Public Control Committee containing recommendations for alteration of the law relating to smoke nuisance, and resolved to apply to Parliament to give effect to the following proposals, which had been formulated after conference with representatives of the borough councils. The conference had expressed its concurrence with the first three of the proposals.

1. That Section 24 (*b*) of the Public Health (London) Act, 1891, which provides that "any chimney (not being the chimney of a private dwelling house) sending forth black smoke in such quantities as to be a nuisance" shall be a nuisance liable to be dealt with summarily under the Act, should be amended by the deletion of the word "black."
2. That the word "chimney" in Section 24 (*b*) of the Public Health (London) Act, 1891, should be deemed to include:
   - (*a*) Openings through which smoke is emitted from buildings or places in which processes of manufacture are carried on, and the chimneys of any building or place where furnaces are used in operations carried on under statutory powers.
   - (*b*) The chimneys of any Government workshop or factory.
3. That in special cases of nuisance arising under Sections 23 and 24 of the Public Health (London) Act, 1891, the proceedings in respect of any nuisance may, at the request of, and by agreement with, the sanitary authority, be taken by the Council in such special cases.
4. That the power of the Council to take proceedings in respect of nuisance created by sanitary authorities under Section 22 of the Public Health (London) Act, 1891, should be extended to apply to smoke nuisance from electricity or other industrial works, or from premises used for the treatment or disposal of refuse, or for disinfecting purposes, or from baths or washhouses or other buildings or wharves owned, leased, or occupied by sanitary authorities in which furnaces are used.
5. That the power of sanitary authorities under Section 14 of the Public Health (London) Act, 1891, to take proceedings in respect of nuisance arising outside their respective areas should be extended to the Council as regards smoke nuisance arising outside the county of London.
6. That the Council should be empowered to expend such money as it may think expedient, not exceeding £500 a year, for the advancement of measures for the abatement of smoke nuisance.

Stable Manure.

In recent years there has been constant decrease in the amount of stable manure in London owing to the displacement of horse by motor traffic. Nuisance from this source is therefore very much less than formerly, a fact which may also be due to the enforcement of the regulations requiring periodical removal, and to the by-law prohibiting manure receptacles sunk below the surface of the ground.

House Refuse.

In Westminster and in portions of Marylebone there is a daily removal of house refuse, and the advantages of this practice are so great that it is difficult to understand why the remaining sanitary authorities do not adopt it. It is disappointing to learn that in Hackney a large number of householders (as many as 4,000 or 5,000 each week) decline to have their house refuse removed. Sir Shirley Murphy points out that such refusal amounts to obstruction, and involves a penalty which should be enforced. The question whether the refuse from a restaurant was house refuse which the sanitary authorities were required to remove, or trade refuse, was the subject of a decision in the King's Bench Division in June, 1909, in the case of Lyons and Co., Limited, *v.* the City of London Corporation. Quoting from the *Justice of the Peace:*

> The appellants were the occupiers of premises which they used as a tea shop, providing customers with refreshment and food for consumption on the premises, some of the food being cooked or prepared on the premises. No one slept on the premises at night. The refuse from the premises consisted of ashes and clinkers, coffee grounds, newspaper, cabbage leaves, egg shells, dust and general dirt, broken crockery, tea leaves, potato parings, sweepings from the floors and sweepings from the rooms. It did not include scraps left by customers, which were given away in charity. The court held that in the circumstances the refuse was house refuse.

County Council Dwellings.

The death-rate at all ages in the Council's buildings which were occupied during the whole year was 10·7 per 1,000 compared with 14.0 per 1,000 in London as a whole. The aggregate population in the dwellings

concerned was 28,195. The diarrhoea and the phthisis death-rates were the same as those which prevailed in London, while the rates from the principal zymotic diseases, excluding diarrhoea, from bronchitis and from pneumonia, were slightly lower than the London death-rate from these causes.

Homeless Persons.

On the night of February 10th, 1910, there were found in the streets 969 persons presumably homeless. In addition about 1,800 men were provided with food and shelter, but no bed, by various philanthropic bodies. If the occupants of the casual wards are added to the numbers given, there were on the night in question 6,644 persons who might be regarded as homeless. On the same night there were 7,580 vacant beds in the registered common lodging-houses.

The Midwives Act.

There were said to be resident in London in 1909 a total of 3,285 midwives, or nearly 600 more than the number recorded in 1908. All practising midwives, with the exception of those claiming institutional exemption or who are working under the direction of a medical practitioner, are subject to supervision by the Council's inspectors, Miss I. R. Shields, M.B., and Miss E. Macrory, M.B. In addition to the ordinary routine inspection, special inquiries are made into all cases in which medical help has been advised on account of inflammation of the eyes. Midwives are also advised on points of difficulty in the course of their duties. The County Council has instituted classes for the instruction of midwives, and eight courses of lectures were given in different parts of London during 1909. The classes have been utilized not only by pupils preparing for the Central Midwives Board, to supplement institutional training, but also by midwives who have been in practice many years.

Unvaccinated School Children.

When discussing the closure of schools for epidemic reasons, Sir Shirley Murphy refers to the risk to which school children are now exposed from the infection of small-pox. Owing to the increased number of children who are unvaccinated, the amount of risk from small-pox to which children may be exposed in school if the disease should again become prevalent is no longer negligible. Under these circumstances, he says, it is well to remember that small-pox is a highly infectious disease, and that the condition of the children as to vaccination needs to be taken into account in determining the question of closure of a class or of the exclusion of particular children.

THE ISOLATION OF MEASLES.

At a recent meeting of the Southwark Board of Guardians it was decided to send children suffering from measles to one of the hospitals of the Metropolitan Asylums Board. This decision was only reached after Mr. T. Cornell, one of the representatives of the guardians on the Asylums Board, had explained that it was not proposed, as some of the guardians appeared to think, that the affected children should first of all be taken to the Poor Law infirmary and then transferred to an asylums board hospital, but that they should be removed direct from their homes to the nearest hospital. Such removal could not have a worse effect than removal from the child's home to the infirmary. The present proposals as to the isolation of measles, he stated, were first put forward by the Local Government Board. They had been fully considered by the Asylums Board in the light of experience throughout the country, including that of Edinburgh, Glasgow, and Liverpool, where permanent isolation accommodation had been provided in infectious diseases hospitals for cases of measles and where it had been proved beyond question that the disease could be safely treated in the same hospital with other infectious diseases. The death-rate from measles among those children who lived in one-roomed tenements was seven to eight times greater than it was among those who lived in four or five roomed houses. It was the children of the former class who would be provided for under the scheme, and it could hardly be doubted that such children would have a better chance of recovery than if they remained in their homes.

Scotland.

[*FROM OUR SPECIAL CORRESPONDENTS.*]

COMPLIMENTARY DINNER TO SIR DAVID C. MCVAIL.

A LARGE assembly of professional and lay friends met at the Windsor Hotel, Glasgow, on January 20th, to entertain Sir David McVail to a complimentary dinner on the occasion of the honour of knighthood recently conferred on him.

The President of the Faculty, Dr. D. N. Knox, who was in the chair, proposed "The Health of Our Guest" in an interesting speech. He paid a well-merited tribute to Sir David's activity as a teacher, first at Anderson's College and then at the Western Medical School, which he founded along with Dr. Duncan, Dr. Reid, and Dr. Knox. In the Western Medical School he taught systematic medicine until he was transferred to the Royal Infirmary and became Professor of Clinical Medicine at St. Mungo's College. From the first Dr. McVail was interested in the great question of medical reform, and it was largely, Dr. Knox said, owing to his skill, determination, and generalship that any benefit was obtained from the Act of 1889. Sir David secured the affiliation clause of that Act. Dr. Knox referred to Sir David's valued service on the University Court and as Crown Representative for Scotland on the General Medical Council. In many respects he was a great controversialist. He was clear, logical, massive, and frequently pungent. As a speaker, he was fearless and dramatic.

In acknowledging the toast, Sir David recalled his early student days, which went back to the time when Lister was making his first experiments with antiseptics. He remembered, in the winter session of 1865–6, Lister, then a very young surgeon, giving demonstrations of the use of certain antiseptics—chloride of zinc being one of them—but the experiments did not turn out well. Lister persevered and elaborated his plans, and in the following May was able to lay before the students the essentials of antiseptic surgery, and in the same summer began the first antiseptic operations, using carbolic acid. Sir David remembered how Lister, on the first day he began to describe his experiments, brought to the lecture-room a bottle full of a liquid which he called carbolic acid, a substance which nobody in the room had ever heard of before. Along with Lister, another young man, William T. Gairdner, was also making his name known, and, largely owing to the efforts of these two men, Glasgow had had a prime share in all the amelioration of medical and surgical work that the world now experienced.

Subsequently, Dr. John Patrick, on behalf of the house-physicians and students of the Royal Infirmary, presented Sir David McVail with a silver salver, candlestick, and flower vases in recognition of their high esteem and to mark the honour conferred on him.

EDINBURGH ROYAL INFIRMARY.

At the weekly meeting of the managers on Monday, January 23rd, the following gentlemen were reappointed for five years as from the date given: Dr. A. H. F. Barbour (gynaecologist), March 19th; Mr. N. T. Brewis, F.R.C.S.E. (gynaecologist), March 28th; Dr. J. Haig Ferguson (assistant gynaecologist), April 2nd; Dr. William Fordyce (assistant gynaecologist), April 2nd. At the same meeting Mr. J. H. Gibbs, F.R.C.S.E., L.D.S., was reappointed dental surgeon for one year as from March 23rd.

QUEEN VICTORIA'S JUBILEE INSTITUTE FOR NURSES.

The twenty-second annual report of Queen Victoria's Jubilee Institute for Nurses, Scottish Branch, shows that the council were directly responsible for the

maintenance of a staff of thirty-two. During the year thirty-nine nurses had successfully passed through the six months' training given in the Scottish District Training Home, and of these four had been given special training, qualifying them for the examination of the Central Midwives Board, which they had passed. The council received and accepted applications for reappointment from three former Queen's nurses, whom circumstances had required temporarily to resign. Since November 1st, 1909, thirty nurses had resigned their connexion with the institute—eleven for private or other nursing work at home or abroad, eight to be married, six for home duties or other work, and five on account of health. Two Scottish nurses had been transferred to work in England. The number of Queen's nurses now on the Scottish roll is 345. This number does not include probationers for the roll still undergoing district training. The nursing associations affiliated to the Scottish branch numbered 216. During the year nine new branches had been affiliated. The council had sanctioned the appointment of a Queen's nurse as health visitor to work under the directions of the medical officer of health in the middle ward of the county of Lanark. This was the first appointment of a Scottish Queen's nurse as health visitor only. During the year 5,828 cases were nursed by the staff at 29, Castle Terrace, Edinburgh, and by the two nurses resident in Leith, and 398 operations were attended.

Death-rate of Glasgow during 1910.

The medical officer of health reports that during 1910 the deaths registered in Glasgow numbered 13,395. The equivalent death-rate was 15.1 per 1,000, calculated on the Registrar-General's estimate of the population, this being the lowest death-rate hitherto recorded on a similar basis. In 1909 the rate was 17.5 and in 1908 17.8. The actual number of deaths registered was lower than in any year since 1890, when the population was only 561,000. During the first three quarters of the year the rate was much below, and for the last quarter about 4 per cent. below, the average rate during the past five years. There was a decrease last year of 111 deaths from infectious diseases, of 117 from phthisis, and of 1,906 from respiratory diseases. As the fog fiend has not been so much in evidence this winter in Glasgow, this decrease in respiratory cases was to be anticipated. With regard to population there is the usual discrepancy between the estimate of the Registrar-General, which is 897,178, and that of the Medical Officer, based on inhabited houses, which gives only 796,409. This discrepancy will be rectified at the taking of the census during the present year.

Adulteration of Foods in Glasgow.

The annual report of Mr. F. W. Harris, chemist to Glasgow Corporation and analyst under the Food and Drugs Acts, contains details of the operations of the department in regard to all classes of foodstuffs. The aggregate number of samples examined and reported upon was 3,646. Of these, the chief sanitary inspector submitted 777 official samples and 294 informal specimens under the Food and Drugs Act. Of the official samples, 105 were certified as adulterated and 33 as of doubtful or suspicious quality. The adulterated samples were therefore equivalent to 13.5 per cent. The doubtful samples were milk, cream, butter, rice, and camphorated oil.

Regarding "sweet milk," much controversy has taken place in connexion with the Sale of Milk Regulations Act of 1901. The point under discussion is generally the fat limit of 3 per cent. Of 60 samples taken at railway termini in Glasgow, in 1 case only was the percentage of fat under 3 per cent., this sample being 2 9 per cent. It contained 15 per cent. of added water; the original percentage of fat, therefore, was well over 3. Of 214 other samples of sweet milk examined during the year, 74 were found to be adulterated; 68.9 per cent. of adulterated samples were deficient in fat, 24.3 per cent. contained added water, while 6 8 per cent. were both deficient in fat and contained added water.

Local authorities, supported by the Local Government Board, now regard the addition of chemical preservatives to milk as adulteration. Out of the 214 samples above noted, 1 contained boron compound equivalent to 37.8 grains of boric acid per gallon, which was slightly under the 40 grains limit recognized by the Board. Of 237 samples of butter, 18 were found adulterated, having either foreign fat or water over the limit.

The mechanical method of polishing rice is now largely supplemented by the employment of extraneous substances. A high polish is obtained by the use of talc, the colour is modified by pigments, and translucency is increased by mineral oil. The glazing mixture, as usually employed, consists of talc, glucose, and glycerine or mineral oil, the result being to cover the grain with a thin coating of polished talc. In the 26 samples submitted, removable mineral matter was found, varying from 0.12 to 0.94 per cent. In the Local Government Board report the suggested outside limit is 0.5 per cent.; the 2 samples in which this was exceeded were certified as adulterated accordingly.

Attention has also been directed to various problems in connexion with aërial sanitation. A specially designed apparatus has been in use to determine the proportion of suspended matter in the atmosphere and to provide a comparative pictorial record of the pollution of the air under various climatic conditions.

Among miscellaneous samples tested was a packet of smoking mixture exposed for sale and retailed to children. It consisted of chopped-up dried leaves and flowers of the common coltsfoot, and it has been left to the medical officer to decide whether the smoking of this herb is likely to prove injurious to children. The sample was received from the police authorities.

Ireland.

[*FROM OUR SPECIAL CORRESPONDENTS.*]

Infant Mortality.

An important meeting of the citizens of Dublin was held in the Mansion House on January 19th, for the purpose of considering the problem of infant mortality. The most immediate object of the meeting was to call public attention to the adoption in Dublin of the Early Notification of Births Act, and to the importance of the establishment of a body of voluntary lady workers in connexion therewith. The first resolution,

> That this meeting of the citizens of Dublin thinks that the time has come to deal with the question of infant mortality in this city, and that it views with much satisfaction the action of the Corporation in adopting the Early Notification of Births Act, and pledges itself to support the carrying out of the Act in every way possible,

was proposed by Dr. Horne, seconded by the President of the Royal College of Physicians, and supported by Sir Charles Cameron. Dr. Horne dealt at considerable length with the causes of the excessive infant mortality in cities, and laid special stress on the importance of attending to the health of the mothers. Poverty, overcrowding, and ignorance were, in his opinion, some of the factors that had to be dealt with, and he believed that the work of the proposed lady inspectors would soon bring about a striking change for the better. The second resolution—to the effect that the offer of the Women's National Health Association to form a body of voluntary workers to assist in putting into effect the provisions of the Notification of Births Act, should form a basis from which to develop a general movement for combating the causes of infant mortality—was ably and sympathetically proposed by Her Excellency Lady Aberdeen. She insisted that most children were born healthy, and capable of developing healthily under proper surroundings, and in order to impress the importance of infant mortality to the community at large, she referred to the investigations of Dr. Newsholme showing that a high infantile mortality implied a prevalence of those

conditions which determined national inferiority. Lady Aberdeen concluded by stating that classes had been formed for the suitable instruction of voluntary workers, and by appealing for a larger number of such workers. A committee was subsequently appointed to manage the work that it is proposed to undertake, and the proceedings terminated with votes of thanks to the Lord Mayor and to Lady Aberdeen.

BELFAST CITY COUNCIL.

Dr. R. Thomson, Chairman of the Public Health Committee, and Dr. A. Trimble, Chairman of the Children's Committee of the City Council, have both been re-elected members of Council and have received numerous congratulations from their fellow-members and the profession. At the meeting of the former committee, it was reported that 779 milch cows within the city boundary had been examined during the period ending January 17th and found free from tuberculosis and other infectious disease. During the week ending January 14th, 1,564 carcasses and 839 pieces had been examined, and 16 carcasses and 334 pieces were condemned as unfit for human food and destroyed.

HOSPITAL FOR SICK CHILDREN, BELFAST.

The annual meeting of Queen Street Hospital for Sick Children was held on January 20th. There had been 561 cases treated in the wards at a daily cost each of 2s. 2¾d., and 271 operations performed. In the out-patient department there had had been 10,864 attendances, and 561 operations performed. Deep regret was expressed at the death of Dr. Joseph Nelson, honorary ophthalmic surgeon for twenty-five years to the hospital; Dr. Wiclif McCready has been appointed his successor. Mr. Brian O'Brien resigned the post of assistant surgeon on his appointment as Local Government Board inspector, and Mr. T. P. Crymble, F.R.C.S.Eng., was elected in his place. The board also expressed its deep regret in recording the death of their President since 1883, the Hon. R. T. O'Neill. His nephew, Captain the Hon. Arthur O'Neill, M.P., had been elected his successor; he represented the third generation of the family who in succession had been president of the hospital.

ROYAL VICTORIA HOSPITAL, BELFAST.

At the meeting of the Board of Management on January 18th, Dr. J. E. MacIlwaine was elected Assistant Physician in the place of the late Dr. W. B. McQuitty.

OLD AGE PENSIONS.

In consequence of the removal of the poor relief disqualification for the receipt of old age pensions, the boards of guardians in several parts of Ireland have drawn up estimates for the coming year on a reduced scale, so as to make allowance for the relief to the rates caused by the removal of so many septuagenarians from the poor relief fund. This action on the part of the guardians has led the Local Government Board to state that it is advisable for the present to include in all estimates a sum equivalent to the actual past cost of relief, indoor and outdoor, as it is proposed to make the Poor Law authorities contribute towards the cost of pensions. This announcement has been received with emphatic protest in many instances.

India.

[*FROM OUR SPECIAL CORRESPONDENT.*]

THE NEW YEAR'S HONOURS LIST.

THE Indian new year's honours list is noteworthy for the liberal recognition of scientific work, no less than three of the twelve members of the recently-formed bacteriological department appearing in it. Lieutenant-Colonel Semple, R.A.M.C. (ret.), receives a knighthood for his administrative work in charge of the Pasteur and the Central Research Laboratories at Kasauli. The Royal Army Medical Corps is to be congratulated on the third knighthood given to one of its scientific members during the last few years, although the sister services have not been so honoured during recent times. Colonel Bannerman, I.M.S., receives brevet promotion for his administration of the Bombay Plague Laboratory, and Captain Christophers obtains nearly four years' brevet promotion to the rank of major for his brilliant researches on malarial and other protozoal parasites. Lieutenant-Colonel Cleveland, I.M.S., also receives brevet promotion to colonel for his secretariat work at Simla. It has frequently been pointed out that purely professional medical work, however distinguished, very rarely leads to Government recognition. It may justly be argued that it brings its own reward both in the satisfaction at the successes obtained and also of a financial nature, and consequently needs no other recognition. In the present Gazette appears the name of Lieutenant-Colonel Henry Smith, I.M.S., who has made a wide-world reputation by his work on eye diseases. The value placed on such work by the Government would seem to be indicated by his being awarded a Kasr-i-Hind medal, the latest and least-valued decoration.

PROPOSED PASTEUR AND RESEARCH INSTITUTE FOR EASTERN BENGAL AND ASSAM.

Some time ago a suggestion was made that a Pasteur Institute for the treatment of hydrophobia combined with researches on tropical diseases, especially those of importance in the tea districts, should be founded at Dacca, the capital of the new province of Eastern Bengal and Assam. It was recently suggested as a suitable provincial memorial to King Edward, and has met with so much support that the committee has advised that a considerable sum from the memorial funds should be devoted to this purpose, if the India Tea Association will also aid in the matter. This proposal has just been considered by the General Committee of the Association, which has decided to submit it to all the members and to recommend a levy of 1 anna per acre of tea under cultivation in the province, which will bring in a substantial sum, provided sufficient funds can be raised to endow as well as to start the institute, and that it shall be governed by a body including non-official as well as official members, so that the medical researches undertaken shall be such as are likely to benefit the tea districts. They are not, however, prepared to adopt the suggestion of the memorial committee that an annual levy shall be raised from the tea gardens for the upkeep of the institute. It is sincerely to be hoped that the proposal will be successfully carried through, although if the funds are not sufficient both for the Pasteur treatment of hydrophobia and for research work, it is to be hoped that as provision already exists in India for the former, the latter at any rate will be provided for, as the Eastern Province affords abundant material to engage the energies of a number of medical scientific workers for a long time to come.

Correspondence.

INTERNATIONAL HYGIENE EXHIBITION, DRESDEN, 1911.

SIR,—In the month of May of this year a great Exhibition will be opened in Dresden, at which a complete record of the achievement of hygiene from the earliest times up to the present day will be laid before the eyes of the public. Advance will be stimulated by means of over two hundred conferences and congresses, and every nation of importance will take part in the endeavour to improve the conditions of mankind.

Since the Government, acting on the advice of the Board of Trade, has decided not to take an official part in this undertaking, there is a grave danger that Great Britain, the admitted leader in hygiene, may be the only nation of importance which is not represented. To save this country from such a disastrous occurrence, the Vice-Presidents of the British Executive Committee, together with a number of men eminent in the world of Science, have issued an appeal letter, asking for the sum of £10,000.

Within a week of the issue of this appeal upwards of £2,000 have been subscribed or guaranteed. Sums of 5s. (from a "Lover of Peace and Goodwill") up to £100 (from the Corporation of Glasgow) have been received, and guarantees of from £1 to £300 have been given. A very generous offer has been made by Mr. Joseph Rowntree. His family will give £500 if nine others will come forward with at least an equal amount.

With confidence we turn to your readers to save Great Britain from having to hang her head in shame. The world has a right to expect this country to take a prominent part in this friendly international endeavour. The Exhibition in Dresden must not be compared with ordinary industrial and "side-show" exhibitions. It will be a vast museum and school, where every legitimate means will be employed in order that its scientific, humanitarian, and educational purposes may be fulfilled.

Time is short. The Administration in Dresden asked for a definite reply by the 15th of this month, but has granted an extension.

Subscriptions, both large and small, will be gratefully acknowledged if addressed to the Secretary. Cheques should be made payable to the Right Hon. Lord Ilkeston.—We are, etc.,

(Signed) THOMAS BARLOW,
Chairman.
ILKESTON,
Honorary Treasurer.
H. W. ARMIT,
Secretary.

47, Victoria Street, Westminster, S.W., Jan. 17th.

TREATMENT OF PULMONARY TUBERCULOSIS.

SIR,—The lecture by Dr. W. Cecil Bosanquet, published in the JOURNAL of January 21st, touches in a broad-minded spirit on several important factors in the treatment of phthisis pulmonalis. On one only of the points raised by him I should like to say a few words. It is that of the therapeutic value of exercise in this complaint.

As a rationale of the good results which admittedly follow graduated exercise we have offered the theory of autoinoculation. Personally I share Dr. Bosanquet's suspicion of this explanation. While not venturing to deny that such a factor may play a part, I believe that what is really of more importance in this method of treatment is the psychical element. Surely it is more "natural" for a man to be at an active job than to be lying all day, though not acutely ill, on his back. To make a man do the latter takes the *morale* out of him—it demoralizes him. To supply him with work such as he can throw himself into *con amore*—this gives him self-respect, hope, courage. And my claim for these psychical states is that they will probably do him more good than even "his own tuberculin."

While purely physical exercises, such as walking, shovelling earth, wheeling barrows, etc., have their use, I should like specially to recommend such forms of occupation as permit of individual self-expression on the part of the patient. Any man who is above the level of the mere animal does best at creative work. My own experience convinces me that there are great therapeutic possibilities, for instance, in pottery and basket-making. Both afford considerable scope for individual artistic treatment, and can even be engaged in by those patients who, owing to fever or other complications, are confined to bed.

To me the sanatorium is essentially a place where people are brought for a time in order to learn *how to live*. It seems strange that work, the fundamental element in and reason for life, has been for so long excluded from the programme of these institutions.—I am, etc.,

ARTHUR J. BROCK,
Visiting Physician Woodburn Sanatorium.

Edinburgh, Jan. 21st.

SALVARSAN ("606").

SIR,—In his letter to the JOURNAL of January 7th, Dr. Hardman raises the question, "Do these new preparations of arsenic for hypodermic or intramuscular injections produce effects which cannot be produced by older preparations and methods?" Limiting this query to "606," we may ask, Does this drug produce effects which cannot be produced by mercury and iodides? Let us consider the main points at issue.

1. Can syphilis be aborted by "606"? The earlier investigators hoped that an abortive cure of syphilis, or *sterilisatio magna*, might be effected by this drug. This idea has, I believe, been abandoned by most observers; in any case, it would be impossible to prove in the human subject. On the other hand, if an abortive cure of syphilis is possible, it might equally well be effected by mercury.

2. Has "606" any curative effect on parasyphilitic lesions? It is well known that parasyphilitic affections, such as tabes, general paralysis, and leucoplakia, are, as a rule, resistant to mercurial and iodide treatment, although improvement has been noted in the early stages of tabes. Against this the more recent observers agree that "606" has no effect in such cases.

3. Is the effect of "606" on the lesions of primary, secondary, and tertiary syphilis more rapid than that of mercury or iodides? Primary chancres and secondary syphilides are said to disappear with marvellous rapidity after an injection of "606." But would not the rapidity of disappearance which we are accustomed to see during mercurial treatment be regarded as "marvellous," if mercury was a new drug with a euphonious pseudonym, advertised with a flourish of trumpets? Again, as regards tertiary syphilis, is it not common to see the lesions heal with marvellous rapidity under potassium iodide?

4. Does "606" cure lesions which are resistant to mercury and iodides? Professor Gaucher, who has recently given a fair trial to "606" at the St. Louis Hospital, comes to the conclusion that this drug is chiefly indicated in cases which are resistant to or intolerant of mercury, but that such cases are rare. I think that the failure of mercurial and iodide treatment is more often due to the method than to the drug or to any idiosyncrasy in the patient. In my experience there are few cases of syphilis which will not respond to judicious combinations and variations in methods of administering mercury and iodides.

5. Can a permanent cure be effected by "606"? This is a question which can only be decided after the lapse of many years, for the only reliable test is whether the drug prevents tertiary syphilis and parasyphilis. This has been proved in the case of mercury by Professor Fournier, as far as statistics can prove anything. Probably many other new preparations will be invented before it can be proved for "606." We are told that a persistent negative Wassermann reaction signifies a cure; but, considering our ignorance of the real nature of this reaction, and the knowledge that it is not specific for syphilis, I do not think this evidence can be accepted as absolutely conclusive. Neither can the occurrence of reinfection with syphilis be regarded as proof of the first attack being cured, for there is evidence to show that reinfection may take place before the original infection is extinct.

It appears, therefore, that the answer to our original question is, on the whole, a negative one, and that if "606" has its indications, these are mainly reduced to the very few cases in which treatment by mercury and iodides fails. If this is the case, it may well be asked whether the Ehrlich-Hata preparation is worth 10s. a dose! I have seen it stated in a recent article[1] that this preparation has been patented by Ehrlich. If this is correct, it is hardly in accordance with the ethics of the medical profession. It has for some time been difficult for the uninitiated to distinguish between new drugs, quack medicines, and patent foods, but the treatment of syphilis by a patent medicine is suggestive of the Middle Ages rather than the twentieth century.—I am, etc.

London, N.W. C. F. MARSHALL.

INDUCED DIVISION OF HUMAN CELLS.

SIR,—In his Bradshaw Lecture, Sir Alfred Pearce Gould, as a peroration to his brilliant discourse, states that the knowledge of the law which governs cell growth is the power required "to prevent, to control, and to cure cancer." In a letter published under the title of "The Bradshaw Lecture" in the BRITISH MEDICAL JOURNAL of January 21st, Mr. Kenneth Campbell also describes the crux of the cancer problem in the following apt question: "What hidden force is it which lashes the epithelial cells into such unwonted reproductive activity?"

[1] Ballenger, *New York Medical Record*, December 10th, 1910.

We beg that we may be permitted to suggest that light is thrown on this problem in a letter by Professor Ronald Ross, which appeared on the previous page of the same issue of the JOURNAL. Professor Ross states that he has seen some of the experiments (described in a recent publication of ours) with new methods of staining living human cells by which we are now enabled to induce division in human lymphocytes by the agency of certain chemical substances. By this method (which in reality was suggested by him several years ago) one can also induce division in polymorphonuclear leucocytes, and in some epithelial cells. These experiments tend to show that the cell division seems to be induced by substances liberated from dead cells, and that cell proliferation in the body is directly caused by the products of katabolism. We should like to reiterate Professor Ross's suggestion that these methods ought to be more widely investigated, because it appears to us that, since we can now induce division of human cells, the solution of the crux of the cancer problem cannot be distant, if it has not already arrived. We also think that this investigation may prove to be a valuable adjunct to, and confirmation of, the admirable researches of Bashford, Ehrlich, Gaylord, Hanau, Jensen, and Loeb, in their investigation of the growth of transplanted tumours.

Unquestionably, these cells can now be made to divide both *in vitro* and *in vivo* in response to kreatin, xanthin, and other substances containing the amidine grouping (M — C = N); and, what is more suggestive, augmented, unsymmetrical divisions can also be induced if this grouping is mixed with certain agents (apparently amines) which can be produced in a dead tissue by the action of saprophytic bacteria.—We are, etc.,

H. C. ROSS.
Liverpool, Jan. 23rd. J. W. CROPPER.

HEADACHE AND SMALL ERRORS OF REFRACTIONS.

SIR,—I was much interested in reading the report of the meeting, on January 9th, of the Medical Society of London, where, in a paper on "Ocular and Visual Conditions in Medical Cases," Mr. Percy Flemming mentions the occurrence, on waking, of headache in cases of refractive error. This symptom has specially interested me lately. Several patients, all young women, who have sought advice because they feel "run down," have complained of this morning headache. I carefully investigated the refraction and found a small error; in each case this was hypermetropic astigmatism. The error of refraction being so small, I was rather dubious about the effect of glasses on the headaches. The result, however, in each case has been most gratifying. I was much interested in reading Mr. Flemming's explanation of this morning headache. My only excuse for taking up your valuable space is because I think this characteristic symptom of (in my experience small) an error of refraction is worthy of more universal recognition.—I am, etc.,

Manchester, Jan. 20th. J. A. JAMIESON.

POOR LAW OUTDOOR RELIEF ORDERS.

SIR,—In the article on this subject (page 152) you draw attention to the fact that the changes proposed by the Departmental Committee will place a "great responsibility" on the "union doctors." It is implied also, and no doubt rightly, that this responsibility will be an addition to their present duties. Increase of responsibility is increase of work of a very exacting character, and I have been unable to find in these departmental recommendations any suggestion of payment for this increased work. You remark that the above-mentioned committee has been trying to carry out as far as possible the recommendations of the late Royal Commission. If there was one thing that the Majority and Minority Commissioners both equally agreed upon, it was that Poor Law medical officers at the present time are inadequately remunerated for their public services; yet no notice whatever seems to have been taken of their recommendation that they should be better paid. On the other hand, if this further great responsiblity without extra remuneration is put upon them, it will reduce still further their present inadequate scale of payment. I had hoped to see in your article some mention of this, as appearing in a leading professional journal, but have been disappointed. It might be justly asked by Poor Law medical officers throughout the country, what is the British Medical Association doing to defend their interests? Many of the 5,000 members of the Poor Law medical service are members of that Association, and are entitled to have their special interests considered, and now is a particularly critical time. What is the Association doing?

A Poor Law Reform Committee has been appointed on which Poor Law medical officers are conspicuous by their absence; and hitherto, the chief work done by that committee has been in connexion with contract work and invalidity insurance. I do not desire to belittle the importance of those subjects to the profession generally, but I cannot consider that I am arrogating too much for the service to which I belong, by expressing an opinion that it is sufficiently important to claim at the present time a committee to attend to Poor Law matters solely.

No doubt it was at first thought that after the report of the late Royal Commission there was going to be a complete revolution of the present system; but every day it becomes plainer that it is not unlikely that reform will chiefly take place by modification of that system. All the practical work hitherto done has been on these lines, and it is emphasized by the appointment of this Departmental Committee. Under these circumstances, an Association Committee representative of the Poor Law Medical Service is specially desirable to put before this Departmental Committee, that is now engaged in and reviewing the wilderness of Poor Law Orders, what changes in the same are necessary, so that the sick poor may obtain more efficient treatment, and Poor Law medical officials some measure of equity. If we had not an organization of our own, we should be almost defenceless in the hands of the lay officials of the Local Government Board; and it is hard on us that we have to bring most of our grievances before the conference of delegates of the various branches of the present Poor Law Service, and rely on their support rather than on that of of the great Association of our profession.

I would like it to be understood that in the above remarks I am speaking as a member of the British Medical Association, and not officially, in the name of the special body of which I have the honour to be the Honorary Secretary.—I am, etc.,

MAJOR GREENWOOD,
Honorary Secretary Poor Law Medical Officers' Association of England and Wales.
London, E.C., Jan. 21st.

STATE SICKNESS AND INVALIDITY INSURANCE.

SIR,—Although not directly affected by the momentous legislation in the way of invalidity insurance and State medical aid which is at the present moment hanging over our heads (owing to my not being in general practice), I am one of those who read with very great interest the letters which you publish weekly in the JOURNAL on this subject, and I was very pleased to see that our Medical Secretary, Mr. Smith Whitaker, had recently been giving a very instructive address on the subject. I have the good fortune now to belong to the South-Eastern Counties of Scotland Division of the Association, and while we are a small Division comparatively, there are some very active members who have been at great pains to bring this very important question before us. One of these, Dr. Oliver, M.O.H. of Roxburghshire, etc., at a recent meeting, in a brief but very lucid address, laid the whole question before us, and made some very practical suggestions as to the action we should take as a profession. As his ideas have practically been embodied in a short circular letter, I take the liberty of enclosing this for your perusal. In this district I think we are all agreed that the profession at large do not realize what a very serious state of affairs we are threatened with. Personally I find every fresh medical man I talk to, especially young medical men, seem to have very little if any knowledge of the matter, for it has never been brought before them. Numbers are not members of the Association, and many who are so often never open the JOURNAL. It must, I am sure, be a common experience to many of your readers who are in the habit of going into doctors' houses to see dozens of unopened JOURNALS lying on a shelf or somewhere out of the way. Well, this cannot be helped, but it is plain at the present juncture that the British Medical Association and its JOURNAL and influence are all we have to look to to defend ourselves from being placed in a most unhappy and hopeless position.

I asked a young medical man, qualified about three years, the other day what he was going to take up. He was at the moment under my care convalescing from an operation. He at once replied, "Oh, I am going into general practice." I immediately opened up on the State aid question. He had never heard of this. Neither was he a member of the Association. I urged him to join.

We are just coming to a new year, and I think one of the very best things that the Association could do in the interests of the profession would be to circularize those who are not members, asking them to consider if they would not now join. A copy of Mr. Whitaker's paper might be enclosed, or a summary of some scheme of a practical and feasible nature such as Dr. Oliver's.

There are certain people just now who say, "Oh, I don't like the British Medical—it is a political association, a mere trades-union." "Such propaganda are debasing to the best interest of the profession." This is the sheerest rubbish. Agreed at once that the more we can keep commercialism out of the profession and away from the spirit of our work the better. But the days of sentiment as regards the doctor are fast disappearing. This is largely due to ourselves and to over and unfair competition. The public will set the exact valuation on our services which we demand and which our colleagues demand.

The fact that we combine and stand solid for exactly what we are justly entitled to—a proper and adequate return for our labours—will excite no one's criticism, but every one's approbation and respect.

The fact that we decline to work when paid below a certain scale in no way debases the profession, but elevates it, and in no way prevents us from performing those wholly unrequited acts of kindness and attention—without hope of fee and reward—which every medical man worth his salt always has and always will perform.

As regards the invalidity insurance, however, we have not to consider charity, but business. We have to deal with the Government, who will pay not a copper more than they possibly can or than we as a profession will accept. We have to sell our brains, not necessarily at the highest price, but at a figure which, while perfectly fair to the Government, is a fair return for our own work.

Among senior members of the profession I have heard very grave concern expressed as to the future. My own view is it entirely depends on ourselves and how we hold together as a profession. Let views as to how fees should be paid, and on what scale, be ventilated in the JOURNAL by all means, so that one may get at the general consensus of opinion and be able to sift the wheat from the chaff. But the end must come to that and a definite scheme be formulated, and opinions taken on it. Why not by referendum? If this be done, we need have no fear for the future, and I rather see in the present crisis a happy opportunity for us to get rid of a reproach to the profession, *undercutting*, and the present wretched club system—the cry of the poor downtrodden general practitioner, etc. What more does any one want than adequate pay and no bad debts, with regular payment of fees?

If we are united we *can* obtain this—of that there can be no question. But it must be made clear to the Government that this is so.

No feelers have been thrown out to the profession as yet. It is very unlikely that they will be until the plans of the Government are complete. The only people who have been approached are the leading friendly societies. What does the vote of the medical profession matter one way or another—to the politician?

I do sincerely hope that the Association will inaugurate the New Year by a campaign to recruit new members by individual postal approach, and also getting hold of young graduates, possibly through the friendly services of the Deans of medical schools, who would in all probability be quite willing to help as far as they can.—I am, etc.,

Peebles, Dec. 22nd, 1910. THOMAS D. LUKE.

ALCOHOLISM AND DEGENERACY.

SIR,—In his address as President of the British Association for the Advancement of Science, delivered at Sheffield in 1879, Professor Allmann devoted very much time in endeavouring to prove the essential similarity of animal and vegetable protoplasm. If his inferences are correct, that such similarity really does exist, it must be of importance to determine how far alcohol influences the protoplasm of germinating seeds. If any of your readers will take the trouble to perform a slight experiment they will find that germination will be absolutely prevented if the medium on which the seeds are planted is moistened with 1 part in 100, 1 in 200, or often with 1 in 400 of pure ethylic alcohol diluted to the extent named with water. Such experiments were first performed, so far as I am aware, by the late Dr. Ridge of Enfield.

A second interesting fact arises out of an experiment which was commenced on a large scale forty-five years ago and has been continued uninterruptedly from that time to the present day. The United Kingdom General and Temperance Provident Institution divided those who took whole-life policies in it into two sections, namely, the so-called general section, whose members drank alcohol in moderation, and the temperance section, who totally abstained from alcohol. It is known that if any member in either division should drink intoxicating liquor to excess (or if one in the temperance section should drink it at all) his policy would be liable to forfeiture. I have obtained the mortality returns for the two classes up to 1909, and the result is as follows: Reducing the figures to a uniform number of 10,000 claims expected in each section it is found that out of 10,000 policies which should have become claims in the temperance section only 7,117 actually became so, while out of 10,000 which should have become claims in the general section 9,416 became so—that is, out of 10,000 policies in the general section 2,299 more policies became claims than out of an equal number in the temperance section—and as the only difference between the sections is that policyholders in the first abstain from intoxicating beverages entirely, while those in the other do not, the figures constitute evidence of the value of total abstinence. There has never been a single example in any of the quinquennial returns published of deviation from such result.

Similar results were obtained from returns relating to totally abstaining and moderate drinking sections of the army of India published a few years ago. Of 3,978 members of the first-named section, there were 45.5 per cent. in hospital during the period covered by the report, and 100.6 per cent. of the latter; there were invalided from service 1 in 180 of the former and 3 in 100 of the latter; while of deaths in the former section there were 2·7 per 1,000, and in the latter 9·5 per 1,000. Every comparison made between men living in similar social conditions, such as Foresters and Oddfellows in one group and Rechabites in another, yields similar results, the totally abstaining members having invariably less sickness and greater longevity. These and many similar facts can be verified by any one who will take a little trouble.

On another very important subject—namely, the effect of maternal inebriety on the health of the offspring—most important evidence was given in a report published some years ago by Dr. Sullivan, Medical Officer in H.M.'s Prison Service, after a prolonged and painstaking inquiry in Liverpool and elsewhere, as published at p. 191 et seq. of his work entitled *Alcohol: A Chapter in Social Pathology*. A single reference must suffice:

> It was ascertained that, of 600 children born of 120 drunken mothers, 335 (55.8 per cent.) died in infancy or were stillborn, and that several of the survivors were mentally defective, and as many as 4.1 per cent. were epileptic. Many of these women had female relatives, sisters or daughters, of sober habits and married to sober husbands. On comparing the death-rate amongst the children of the sober mothers with that amongst the children of the drunken women of the same stock, the former was found to be 23.9 per cent. and the latter 55.2 per cent., or nearly two and a half times as much. It was further observed that in the drunken families there was a progressive rise in the death-rate from the earlier to the later born children. The type of alcoholic family suggested by the figures—a type characterized by a regular decrease of vitality in the successive children—was frequently realized in individual cases, as, for instance, in one observation, where the first three children were healthy, the fourth was of defective intelligence, the fifth was an epileptic idiot, the sixth was dead-born, and finally the reproductive career ended with an abortion.

Similar striking evidence was published by the late Professors Parkes and Sanderson in a report drawn up by them at the request of the Town Council of Liverpool in 1871. One or two quotations may also be made—quite common ones—from it. At page 68 it is stated: "In another instance the wages are 30*s.* a week regularly. The father and mother are both drunken, and three children are half starved and in rags." While in another:

'The children are in rags and filth and look idiotic. In the same street there are sober men earning only 20s. and 23s. a week"—the former man was earning 27s. per week—"and living in comfort." Such reports as those mentioned, as well as the valuable yearly returns of Dr. Hope, the medical officer of health of the City of Liverpool, would amply repay study, and, as these all deal with facts, and facts only, are most important in their bearing on the subject.—I am, etc.,

Deganwy, N. Wales, Jan. 21st. WILLIAM CARTER.

*** We received on January 19th a communication from Professor Karl Pearson stating that, owing to the death of a near personal friend, his rejoinder to Sir Victor Horsley and Dr. Mary Sturge had to be postponed for a week or two. It did not seem necessary to publish this statement last week, but as, owing to the derangements caused by the printers' strike in London, we had to inform Professor Pearson that we were unable to receive a reply this week, seems desirable now to state the fact.

IS PONOS KALA-AZAR?

SIR,—It was with very great interest that I read in the *Journal of Tropical Medicine* of January 2nd of Professor Ronald Ross having received from Professor Gallé of Rome intimation of the latter's discovery of the Leishman-Donovan body in a case of "ponos" from Spetsai. This discovery, when corroborated and confirmed (as, doubtless, will soon be the case), will remove from the category of theory to that of fact the suggestion made in my paper read at the Annual Meeting of the British Medical Association in July, 1909, that ponos was not a disease *sui generis*, and that all known facts pointed to its being really kala-azar.

Once granted that ponos is kala-azar there would appear to be an excellent opportunity for investigation as to the carrier of the disease. It is generally believed that kala-azar is an insect-borne disease, the common bed-bug being suspected to be the carrier, and now that ponos has been shown to be kala-azar under another name it should surely be easier to discover the missing link between the Leishman-Donovan body and the patient in a small island such as Hydra or Spetsai, where insect pests are few, than in a vast area such as that where kala azar is found in India, where insect life teems.

No work of this nature is likely to be carried out in the islands themselves, and only a medical man accustomed to entomological and bacteriological work, and speaking the local language (Greek or Albanian), could hope to be successful in tracing the connexion or even to point out the way to success.

Professor Gallé's discovery, however, will have the effect of removing from the nomenclature of tropical diseases a local name which was in itself a confession of ignorance.—I am, etc.,

Larnaca, Cyprus, Jan. 12th. GEORGE A. WILLIAMSON, M.A., M.D., D.P.H., D.T.M.

SWABS LEFT IN THE INTESTINE.

SIR,—May I be permitted to offer my congratulations to Mr. Ryall upon the issue of his defence in the case of Abbott and Wife *v.* Ryall, and at the same time to express my sympathy with a surgeon who did his best, and that successfully, to a patient whom Nature, uncontrolled, would have removed from this world. The case, to my mind—which is now governed by an experience of a quarter of a century of kaleidoscopic changes in the art of surgery—raises issues which are of a grave nature to those of us who do their best according to their convictions from acquired knowledge, and also by the adoption of personal resources, to save their clients for the blessings of the prolongation of life.

The first issue, to my mind, is the necessity on the part of the medical profession of creating an ethical code in order to guide those members of the profession who feel it their duty to support plaintiffs against alleged wrongful treatment by other members of their profession. The second issue I consider to be the necessity of creating a tribunal before which members of the profession may be brought for public trial on account of violating that ethical code through ignorance of the existing methods of treatment, and to give their reasons for disagreeing from methods adopted by defendants in cases of prosecution.

The medical profession, as I understand it, desire the public to be duly safeguarded against risk to life from ignorant and careless action taken by its members; at the same time, it is no less jealous of the reputation of its progressive art that its members be allowed to do everything in their power to advance, by innovations in handicraft, and new remedies in treatment, the evolution of the science and art of medicine. Lawsuits will not deter dreamers of progress from pursuing their aims in art, medicine, and science.

I venture to deal with some points raised by the prosecution and also by the defence. With the latter I should like to deal first, because, for the last decade, I have on occasions left not one, but two, swabs inside the bowel after completing the suture. My confession comes easy, not because I have done it originally, like Mr. Ryall, but because I copied it from a well-known surgeon at Lausanne; whether it is his invention or not I do not know, but I have had the opportunity of witnessing him do it in his own invention of *gastro-entérostomie en Y* on different occasions.

I tried to avoid the inclusion of such swabs within the gut by means of a mechanical device—a shouldered three-bladed forceps—but I confess it has not answered in all the cases where it might theoretically have been useful, and I have had to fall back upon the device seen by me at Professor Roux's clinic.

The point on behalf of the defence to which I would desire to draw attention is that Mr. Russell Howard, F.R.C.S., in cross-examination, stated, p. 176: ". . . I would have examined the bowel with an electric lamp, and could then have pulled the swab out with a forceps." *And in re-examination:* "He had never heard of a swab being left in a case of this kind"; and "there was, in his view, considerable risk of at least one stitch passing through the swab. The sigmoidoscope was used for searching for obstructions in the bowel."

Can any reasonable medical man—not layman—with extensive practical knowledge of the use of the sigmoidoscope agree for one moment that that instrument should have been used in this particular case? Would its use not have been highly dangerous? Does the profession not know of cases where its use in ordinary examination of the sigmoid flexure (not indeed one that has been recently sewn up) has caused the death of a patient?

I submit, with deference, that the opinion expressed by the present distinguished President of the Divorce Court, Sir Samuel T. Evans, in a case in which he took part some years ago, is the sound one—namely, that questions of this nature would be a matter of interest for a learned medical society to discuss, but not for a jury of laymen to pass a verdict upon.—I am, etc.,

Cardiff, Jan. 24th. J. LYNN THOMAS.

TUBERCULOSIS AND STATE INTERVENTION.

SIR,—In the JOURNAL of January 21st the Joint Honorary Secretaries of the Conference on Tuberculosis, recently held at Edinburgh, charge us with making "ambiguous and misleading" references in the preface of the second edition of the *Conquest of Consumption*, to what took place at the conference. They give the actual terms of the resolution to which we referred. It was as follows:

> That the special attention of the Chancellor of the Exchequer, Government, and Parliament be called to the great importance of giving the prevention and treatment of tuberculosis a prominent place in the proposed scheme of invalid insurance.

A conference of experts considers the question of the working man in relation to tuberculosis. It decides to ask the Government to consider the great importance of dealing in a prominent manner with not only the prevention, but the treatment, of tuberculosis in a State insurance scheme. When we draw the deduction that the conference could not have decided to take such a step without meaning that some form of State intervention in regard to tuberculosis is necessary, we are accused of saying what is not the fact. For some reason the joint honorary secretaries contented themselves in their letter with a portion

of a sentence from our preface. What we wrote was as follows:

The representative conference held in Edinburgh in connexion with the annual meeting of the National Association for the Prevention of Consumption in July, 1910, although divided as to the form which State intervention should take, was practically unanimous in the opinion that some form of such intervention was necessary, and the proposition was supported by leading administrative officers in some of the largest cities in the kingdom.

Is this comment either ambiguous or misleading? If so, then the special Sanitary Commissioner of the *Lancet* was also in error in his account (July 9th, 1910, p. 120) of the debate on this question at the conference. He wrote:

The Conference was unanimous as to the issue, the only difference being whether the desired legislation should be part of a general scheme or a law dealing only with tuberculosis.

—We are, etc.,

ARTHUR LATHAM,
CHARLES H. GARLAND.

London, W., Jan. 24th.

HYPERCHLORHYDRIA AND ITS COMPLICATIONS.

SIR,—It would not have occurred to me that the readers of the BRITISH MEDICAL JOURNAL were so deficient in literary intelligence as not to perceive that my lecture on the above subject was a condensed representation of my own views and experience, and that the reason for the selection of the subject of lecture was that other views, within recent months, had been expressed in the pages of the medical journals. Dr. George Herschell appears to have some anxiety on this point, but I should hope that on this, as on other points, Dr. Herschell's judgement is in error.

I am quite aware that several morbid conditions may simulate, and are not infrequently mistaken for, hyperchlorhydria; also that other morbid conditions may be associated with hyperchlorhydria. The business of the physician is to differentiate these. To state, as Dr. Herschell states, that the symptoms of hyperchlorhydria may be present without over-secretion, or even without the presence of free acid, means, of course, that the symptoms have been misinterpreted.

I believe that hyperchlorhydria is a clinical entity, and that some stomachs are more sensitive than others to the acid. Dr. Herschell apparently does not recognize these cases, and I do not venture to think that anything I could say would lead him to my view.

I shall only refer to one other point, as it seems to me to reveal the character of his criticism. He quotes from my lecture where I refer to chronic ulceration as follows: "Were it established that a serum treatment had been found which ensured the healing of chronic ulcerations"; and he goes on to say in the last paragraph of his letter, "He (Dr. Russell) evidently is unacquainted with the treatment by antilytic horse serum." May I suggest that here again Dr. Herschell shows a defect in literary perception? I used the word "established" deliberately. I am acquainted with the contentions regarding the serum mentioned, but I hold that these claims have not yet been *established*.—I am, etc.,

WILLIAM RUSSELL.

Edinburgh, Jan. 23rd.

THE CAUSE OF APPENDICITIS.

SIR,—I was for three years working in mission hospitals in the North-West Provinces of India—1905 to 1908. During this time we dealt with approximately 20,000 patients, and among these I saw 5 cases of appendicitis, 2 of which were tuberculous.—I am, etc.,

H. B. HANSON.

Elstree, Jan. 17th.

SHIP SURGEONS.

SIR,—Some time ago, in the BRITISH MEDICAL JOURNAL, I stated that the White Star, Cunard, American, Dominion, and Leyland Companies had printed a notice to the effect that their surgeons are permitted to charge reasonable fees for the treatment of saloon passengers when the illnesses of passengers are due to causes originating before coming on board. I am glad to say that the Allan, Canadian Pacific, and Booth Steamship Companies have lately adopted a similar notice. I wish to suggest that if the medicals practising in each seaport town would bring the action of these companies to the notice of their local steamship companies, and in a quiet way, they might be induced to follow the Liverpool system.—I am, etc.,

R. R. RENTOUL.

Liverpool, Jan. 23rd.

RESEARCH DEFENCE SOCIETY.

SIR,—As it is just three years since the Research Defence Society was formed (January 27th, 1908), we hope that you will kindly find room for a short account of its work during the past year. The number of members, which was about 2,800 a year ago, is now 3,770, and the number of associates, which was 130, is now 230. Six new branch societies have been formed, making nineteen in all. Since January last the following have consented to be Vice-Presidents of the Society: The Bishop of St. Asaph, Miss Balfour, Sir George Beatson, Dr. M. G. Biggs, Sir John Carrington, Lord Hugh Cecil, the Bishop of Chichester, the Earl of Durham, the Bishop of Ely, Sir David Gill, Sir Archibald Hepburn, Lord Kenyon, Professor Leith, the Duke of Norfolk, the Bishop of Nyasaland, Mrs. Henry Sidgwick, the Bishop of Stepney, and Archdeacon Watkins.

Since January last the following pamphlets and leaflets have been published by the Society: (1) Pasteur, Science, and Medicine, (2) The Nation and the Tropics, (3) Plague in India, past and present, (4) The Helpfulness of Physiological Experiments to the General Practitioner, (5) Report of Annual General Meeting, (6) Diphtheria and Antitoxin, (7) Inoculations, (8) Experiments during 1909, (9) Charges of Cruelty against the Rockefeller Institute, (10) Fighting the Invisible, (11) What the Doctor says, (12) The National Welfare, (13) The Brown Dog, (14) A Question of Religion, (15) The Research Defence Society, (16) Sleeping Sickness, (17) Malta Fever, (18) Experiments on Dogs, (19) In Memoriam, Louis Pasteur, (20) Humanity and Science, (21) Friends of Animals.

There has been a very great increase during the past year in the quantity of pamphlets and leaflets distributed, and in the number of addresses and popular lectures and lantern lectures given by members of the society in all parts of the country. Many debates also have been attended in London or elsewhere by the society's representatives, with excellent results. We are constantly finding that the great majority of the audience on these occasions, after hearing both sides, is strongly in favour of the views of our society.

A large quantity of our publications has been distributed among Public Libraries and similar institutes; a large quantity, also, is sold in the ordinary way of publication.

During the past few months the society has been represented by stalls held at the following exhibitions: the Church Congress, the Annual Meeting of the British Medical Association, the Kennel Club Show, and the Birmingham Dog Show.

The Research Defence Society has nothing to do with the actual making of experiments on animals, nor with the administration of the Act: nor does it desire to see the abolition of restrictions on experiments on animals in this country. It keeps itself to the work for which it was formed three years ago: that is, to make generally known the facts as to experiments on animals in this country and the regulations under which they are conducted, the immense importance of such experiments to the welfare of mankind, and the great saving of human and animal life and health which is already due to them.

We hope that many of your readers will become members or associates of the society, and will help to extend its educational work.—We are, etc.,

CROMER,
President.
SYDNEY HOLLAND,
Chairman of Committee.
F. M. SANDWITH,
Honorary Treasurer.
STEPHEN PAGET,
Honorary Secretary.

21, Ladbroke Square, London, W., Jan. 25th.

Universities and Colleges.

UNIVERSITY OF CAMBRIDGE.

Degrees.

THE following degrees have been conferred:

M.D.—D. V. Cow, R. E. G. Gray.
M.B.—A. C. D. Firth, G. C. Lim, A. Goulston, N. Mutch, A. J. May.
B.C.—H. W. Barber, A. Goulston, K. I. Singh, P. F. Wilson, H. G. Greaves, N. Mutch, T. W. S. Hills, R. M. R. Thursfield.

Tropical Diseases.

The following candidates have been approved for the diploma in Tropical Medicine and Hygiene:

W. A. Anderson, F. V. O. Beit, R. T St. John Brooks, A. Hutton, I. H. Murray, H. G. S. Webb.

UNIVERSITY OF EDINBURGH.

University Court.

AT the meeting of Edinburgh University Court on January 16th, Dr. A. H. F. Barbour was reappointed University Lecturer on Gynaecology; and Mr. J. W. Dowden, M.B., C.M., F.R.C.S.E., was appointed an additional Examiner in Surgery and Practical Surgery. The gift by Emeritus Professor Crum Brown of a set of the *Zeitschrift für physikalische Chemie*, consisting of 75 volumes, was accepted with thanks.

UNIVERSITY OF GLASGOW.

Statistics of Matriculated Students.

A STATEMENT of the numbers of matriculated students at Glasgow University during the past twenty years has been issued from which it appears that the number of medical students was smaller in 1910 than in 1889, though the total number of students in all faculties was nearly the same in the two years.

Year.	Arts.	Science.	Divinity.	Law.	Medicine.	Total
1889	996	—	95	192	818	2101
1890	998	—	88	197	770	2053
1891	972	—	93	206	820	2091
1892	941	—	89	205	760	1995
1893	780	129	90	193	695	1887
1894	677	119	71	186	618	1671
1895	611	113	61	182	617	1584
1896	571	123	62	225	621	1602
1897	587	112	58	211	565	1533
1898	634	147	54	215	557	1607
1899	654	166	41	213	590	1664
1900	673	160	41	200	584	1658
1901	661	183	51	196	588	1679
1902	687	198	53	191	642	1771
1903	681	238	49	193	604	1765
1904	688	248	51	187	639	1813
1905	684	248	43	208	645	1828
1906	700	274	56	203	626	1859
1907	688	321	59	234	622	1924
1908	695	347	60	214	606	1922
1909	727	428	60	203	602	2020
1910	754	421	56	176	618	2025

It will be seen that in all cases the minimum was reached during the last decade of the nineteenth century, but that there has been a small and irregular increase since. Apparently the rise in the total number of students is mainly due to the remarkable increase in the number in the Science Faculty.

"Final Year" Medical Dinner.

Professor Murdoch Cameron presided at the dinner of the final year medical students of Glasgow University, which was held in St. Enoch Station Hotel on January 18th. This dinner is the event of the year, when—as the menu card had it—

> Teacher and taught, the plougher and the ploughed,
> The lion and the lamb lie down together.
> Fast fly the hours with laughter, long and loud,
> Song, wine and blether.

This card as usual was an elaborate affair, with photographs, autographs, and numerous apt quotations. Professor Gemmell, who proposed "The Year," gave some interesting reminiscences of the old college.

UNIVERSITY OF LIVERPOOL.

THE following candidates have been approved at the examination indicated:

D.P.H.—J. Green, S. M. Green, Blanche M. Z. Johnston, W. W. Mackarell, S. P. Mort, J. F. Whelan.

CONJOINT BOARD IN SCOTLAND.

THE following candidates have been approved at the examinations indicated:

FIRST COLLEGE.—V. M. Patel (Bombay), R. N. Raja (Madras), B. S. Raj (Hyderabad), Mary Lyon-Mercado (Poona), J. Martin, A. M. Burge (Australia), R. S. Agrawal (Bareilly), H. N. Hukku (Agra), G. da Silva (Goa), S. G. Rasul (Abbottabad), B. L. Shome (Calcutta), J. M. R. Hennessy (Bangalore), M. R. Kochhar (Gujrat), D. J. Chand (Bahawalpur), G. R. Vohra (Punjab), R. C. Mitter (India), W. Macleod.

SECOND COLLEGE.—P. L. Manuel (Mauritius), J. Corcoran, J. Remers, C. R. C. Moon.

THIRD COLLEGE.—V. M. Patel (Bombay), J. B. Wilman, J. J. Dyke (Scotland), J. A. Whitla, R. N. Raja (Madras), A. R. Henry (Cape Colony), G. Singh (India), S. G. Rasul (India), J. I. Arnold, W. Brennan, W. S. Durward, J. R. Smith, M. F. A. L'Hoste (Mauritius), M. R. Kochhar (Gujrat).

FINAL.—Dorothea L. Schwabe, D. Cogan, Rose Moskovitch (Poona), E. E. Doyle (Bombay), R. L. Hughes, C. O'Herlihy, J. T. Mackenzie, H. B. Chamberlain (Ontario), D. Murphy, N. Williams (Ceylon), A. J. Crowley, P. C. Benerjee (Calcutta), P. K. K. Naidu (Madras).

SOCIETY OF APOTHECARIES OF LONDON.

THE following candidates have been approved in the subjects indicated:

SURGERY.—*†M. J. A. Des Ligneris, *†B. W. Loewenberg.
MEDICINE.—*†G. J. F. Elphick, *B. W. Loewenberg, *F. G. Norbury.
FORENSIC MEDICINE.—N. S. Adler, J. Ellison, R. G. Maglione.
MIDWIFERY.—A. J. V. Mathews, H. Rowntree.
* Section I. † Section II.

The diploma of the society has been granted to Mr. B. W. Loewenberg.

Public Health AND POOR LAW MEDICAL SERVICES.

VITAL STATISTICS IN ENGLAND AND WALES (1910).

WE are indebted to the Registrar-General for the following rates, compiled and published for the convenience of medical officers of health. The figures are provisional and subject to revision.

ENGLAND AND WALES.

Annual Birth-rates, Death-rates, and the Death-rates from the Principal Epidemic Diseases.

	Annual Rates per 1,000 Living.				Deaths under One Year to 1,000 Births.
	Births.	Deaths. Crude.	Deaths. Corrected*	Principal Epidemic Diseases.	
England and Wales	21.8	13.4	13.4	0.99	106
77 great towns ...	25.0	13.4	14.3	1.23	115
136 small towns ...	23.7	13.4	12.9	0.88	104
England and Wales less the 213 towns	25.0	13.6	12.8	0.74	96

* The corrected death-rates are the rates which would have been recorded had the age and sex constitution of the populations of the several areas been identical with that of England and Wales as enumerated in 1901.

COUNTY OF DURHAM VITAL STATISTICS FOR 1910.

DR. T. EUSTACE HILL, the County Medical Officer of Health of Durham, has produced the chief vital statistics relating to 1910 at an early date. The estimated population of the administrative county was 865,960. The birth-rate was 34.4 per 1,000 of the population. The death-rate from all causes was 15.1 per 1,000, from the principal zymotic diseases 1.62 per 1,000, and from phthisis 0.88 per 1,000. The infantile mortality-rate was 126 per 1,000 births. These rates are all below the mean rates for the ten years 1900–1909, but do not materially differ from those recorded for 1909.

DURATION OF INFECTION AFTER SCARLET FEVER.

A. G.—It is the usual practice for a medical officer of health to accept the certificate of the medical attendant as to the termination of the period of infection. A rigid adherence to six weeks' isolation of a case of scarlet fever is not commonly required. Regard is had more to the absence of discharge from the ears, throat, or nose in determining the conclusion of the infective period.

A LABORATORY of criminal anthropology has been established in connexion with the prison of Forest in Belgium. Dr. Vervaeck of the Brussels Anthropological Society has been appointed head of the laboratory, in which it is proposed to collect and co-ordinate anthropological observations made on the prisoners.

MAJOR-GENERAL WOOD, Chief of Staff of the United States Army, has, says the *Medical Record*, issued a general order directing all commanding officers throughout the service to use their best efforts to induce all officers and men under their order, and all civilians connected with the army, to submit to vaccination against typhoid fever. The order is not compulsory except under such special conditions as may justify it.

Medico-Legal.

THE BATTERSEA "BROWN DOG."

In the case of Woodward and others *v.* the Mayor, Aldermen, and Councillors of the Borough of Battersea, tried before Mr. Justice Neville on January 20th, the plaintiffs, Miss Woodward, Mr. Quintanilha, and Miss Howey, sued on behalf of themselves and all other members of the International Antivivisection Council, for an Order that the defendants, the Borough of Battersea Town Council, do forthwith restore and re-erect upon the site from which it was removed a certain drinking fountain, known as "Brown Dog" Memorial, formerly situate in the Latchmere Estate Recreation Ground, from which it was removed, as the plaintiffs alleged, contrary to the express agreement under which it was subscribed for by the plaintiffs and others, and presented to the defendant corporation, and also contrary to a deed of September 12th, 1906, made between Miss Woodward and the defendant corporation. The defendants denied the agreement alleged, and in the alternative pleaded that such an agreement was void on the ground that it was contrary to public policy by reason of the inscription on the memorial containing a criminal or actionable libel of and concerning the council or governing body of University College, London.

Mr. C. E. E. Jenkins, K.C., and Mr. A. A. Bethune appeared for the plaintiffs, Mr. Quintanilha and Miss Howey; and Dr. E. P. S. Counsel appeared for Miss Woodward. The defendants were represented by Mr. Peterson, K.C., and Mr. McCardie.

Mr. Jenkins, stating the facts of the case, said the defendants on June 8th, 1904, accepted the plaintiff's offer to supply the memorial in question, but before it was erected they required the sum of £300 to be deposited with them as an indemnity against the cost of any proceedings that might be brought in respect of its erection with the proposed inscription. On September 16th, 1906, the drinking fountain, etc., which cost £171 6s. 2d. to erect, was publicly unveiled. On March 10th, 1910, as the result of a resolution passed late the night before at a council meeting, the defendants caused the memorial to be taken down and entirely cleared away. The plaintiffs contended that the defendants had contracted and agreed with Miss Woodward in her individual capacity, or alternatively with her on behalf of the council, to keep the fountain maintained on the site in question, or some other suitable site. The plaintiffs had no animus against University College, but, on the contrary, had the greatest admiration for the work done there. His clients would have been perfectly ready to adopt some other form of inscription than the one complained of, putting it in more general terms. Counsel then referred to the disturbances which had been made by medical students who objected to the statue, but, in his opinion, a great deal of exaggeration had taken place with regard to it. Medical students, who traditionally committed breaches of the peace as part of their hospital training, must not be taken too seriously. If he were to call evidence, he should be prepared to show that the plaintiffs had no malice against University College of any sort. Their complaint was against the practice of vivisection as sanctioned by the statute, and they were not actuated by any feeling against any particular institution as such apart from the practice.

Dr. Counsel submitted that on the facts an injunction should be granted if the court had the power. The way in which the statue had been removed in the early hours of the morning reminded one of cattle raiding more than anything else. If the statue were replaced, the plaintiffs were prepared to remove the name of University College. He submitted that it was not in any way contrary to public policy.

Mr. Justice Neville (without calling upon the defendants), in giving judgement, said the first question he had to consider was whether or no the plaintiffs, or either of them, were in a position to maintain the action. On the evidence it was clear that there was no contract on the part of the Battersea Corporation to maintain the drinking fountain which they accepted at the hands of Miss Woodward and the Antivivisection Council. If the matter rested there, of course that would be an end of the case, but it was said that in a deed of September 12th, 1906, made between Miss Woodward of the one part and the corporation of the other part, there were to be found in the recita's words which operated as an estoppel, precluding the defendants from denying that they had entered into a contract to erect and maintain the drinking fountain. In a certain sense he thought that was true. Upon a fair reading of the document it appeared that the defendants recited that they had entered into an agreement for the maintenance of the fountain, but he thought that it was clear from the words used that the agreement referred to was an agreement with the Antivivisection Council, and not an agreement with Miss Woodward. It was perfectly clear that Miss Woodward was not contracting on behalf of the Council, but on her own behalf, and it was clear to him, therefore, that there was no contract with her, and no recital of any contract with her to maintain the fountain. Therefore, it seemed to him that she could not sue. On the other hand, if it was taken that there was an estoppel preventing the corporation from denying that they had entered into an agreement, that agreement was with the Antivivisection Council, and they were no parties to the agreement of September 12th, 1906. Consequently there was no estoppel between the Antivisection Council and the corporation. So that whether the action were treated as one by the members of the Antivivisection Society, or as one by Miss Woodward, there was no contract under which either of them could sue, and no estoppel. On this point, therefore, the action must of necessity fail. He did not think he ought to leave the case without expressing his opinion on the other part. Assuming that an action could be maintained by any one, the question arose, Was there such a contract as the court would enforce? In his opinion there was not. In the first place he thought it was quite clear, having regard to the words of the inscription, that it was not a mere monument to a dog or dogs which had suffered in the interests, or supposed interests, of humanity. It might be that an inscription of that kind would be perfectly unobjectionable. Putting the best construction on it he could, and as well as he could coming to a conclusion as to what the probable and natural effect of it would be, it seemed to his lordship that it was calculated to hold up University College in one aspect of its functions to public execration and to inflame the public mind against them, and he thought it was calculated to lead to a breach of the peace, particularly having regard to the character of the institution of which the words, which he thought were defamatory, were used. If that were so, was the contract in question of such a character as that the court ought to enforce it? He wished at once to say that it was no question of whether the continuance of vivisection, or the abolition of vivisection, was in the public interest, or whether the advocacy of one or other of the opposing views was in the public interest. The question that the court had to consider was whether the publication in the manner described of the words in question was in the public interest, and this depended, he thought, upon whether they were calculated to lead to a breach of the peace, and to disturbance. His Lordship was distinctly of opinion that they would, and, whatever might be said of the causes of it, there was no doubt as a matter of fact that they did lead to a breach of the peace being committed. He thought, therefore, that the court would be going altogether beyond its functions, and acting contrary to its duty, if it were to enforce any such contract. On the other hand, he thought that owing to the fluctuations of opinion that had taken place on the Battersea Borough Council, Miss Woodward particularly, and also the members of the Antivivisection Society, had suffered some hardship. In the result, therefore, he proposed to dismiss the action without costs.

In reply to Mr. Jenkins, Mr. Peterson said the question as to returning the statue must come before Council. He could not deal with it then.

Mr. Jenkins asked what was proposed to be done about the £300 deposited. Was that to be kept?

Mr. Peterson said there had been a libel published.

Mr. Justice Neville said he could not deal with that in the action then before the Court.

WORKMEN'S COMPENSATION.

Employment of Medical Referees in cases of Fatal Accident.

In a case at Newcastle (December 22nd) Judge Greenwell was invited to refer a case to the medical referee in the following circumstances: A man who had received a blow on the head returned to work for eight days, but he subsequently died of acute mania. An autopsy disclosed no objective signs. A claim for compensation was made on the ground that the mania was caused by the accident. Application was made to the judge to send the case to the medical referee for decision. In the course of his judgement His Honour said that, having considered the section of the Workmen's Compensation Act with regard to the duties of medical referees, it appeared to him that this was not one of the cases that came within that section, because the section applied to the case of a living man, who could be examined by the medical referee, who might learn something more than that which appeared in evidence. Whether that might be correct or not, at all events it was perfectly clear, under the circumstances, that nothing could be gained by having an opinion additional to the opinions already given by the medical men; the Court would be left in exactly the same position of having to decide between the conflicting opinions of the medical gentlemen. That would also be the case if he tried the case over again, with medical assessors sitting beside him, because owing to the circumstances of the case nothing more could be found out by those medical gentlemen, and they would only be able to offer their opinion upon the evidence which had been given, and upon the report of the gentlemen who made the *post-mortem* examination. The parties had agreed not to call that gentleman to give evidence, and, at all events, a great deal had been lost in arriving at the truest conclusion, because that gentleman's attention was not invited, at the time of the examination, to the suggestion that the mania might possibly be the effect of a blow. In the event His Honour found that death was not caused by the accident, and decided in favour of the employers.

SUPERSESSION.

Nemo.—The following paragraph from the report on the ethics of consultation approved by the British Medical Association, and published in the Supplement of May 9th, 1908, would appear to apply:

> 10. *Consultant not to Supersede attending Practitioner.*
> A practitioner who has seen a case in consultation should not supersede the attending practitioner during the illness with regard to which the consultation is held, and if he be asked to attend or prescribe in any future illness he should only do so after explanation with the attending practitioner, unless circumstances make this impracticable.

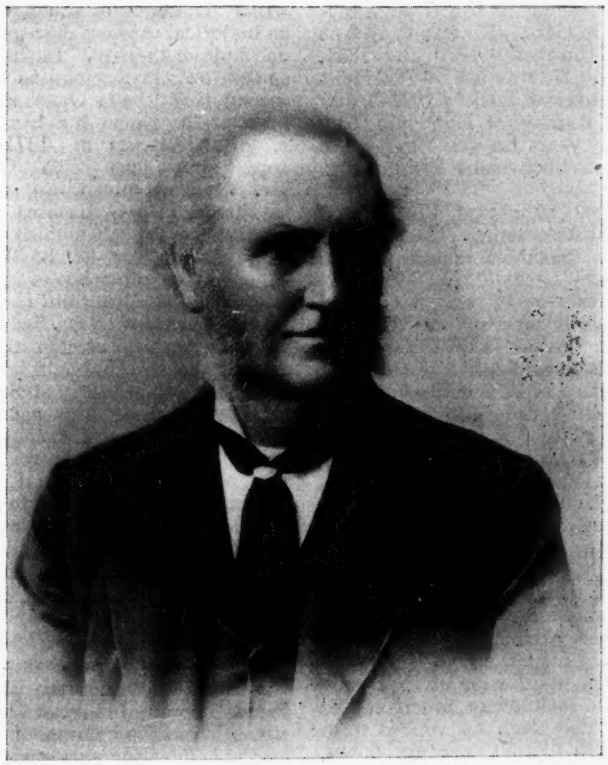
Obituary.

HENRY POWER, M.B.LOND., F.R.C.S.ENG.,

CONSULTING OPHTHALMIC SURGEON, ST. BARTHOLOMEW'S HOSPITAL, LONDON, AND TO THE ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.

THE death of Mr. Henry Power at Bagdale Hall, Whitby, on January 18th removes from the medical profession a good example of the Victorian era. He inherited from his Irish ancestors the versatility, quick-wittedness, gaiety, and friendliness which made him a favourite with every one, and from his Yorkshire mother the doggedness which enabled him to bring out successive issues of *Carpenter's Physiology*, and to undertake with Dr. Leonard W. Sedgwick the Sydenham Society's edition of *Mayne's Lexicon of Medicine and the Allied Sciences*. It is true that throughout his long life the Irish impulsiveness was predominant, but it was held in check by the calmer counsels of his pure-bred Saxon wife.

Born at Nantes in France on September 3rd, 1829, he was the only child of the second marriage of Captain John Francis Power with Hannah, daughter of Henry Simpson, of Meadowfield, Whitby. His father came of a long line of soldiers, and received his first commission at the early age of 14. He had served through the Peninsular, Baltic, and Waterloo campaigns, and received the Peninsular medal (1793–1814) with a clasp for Sahagun and Benevente as a cornet in the 3rd Dragoons, King's German Legion, and the Waterloo medal as a lieutenant in the third regiment of Hussars, K.G.L. He was afterwards Captain and Major in the 35th (Royal) Sussex regiment, "The Old Orange Lilies," and at the time of his death in 1856 he was Lieutenant-Colonel in command of the British Foreign Legion at Shorncliffe. Shortly after his birth Henry Power was taken to Barbados, where his father was quartered, and narrowly escaped death in the hurricane which devastated the island on the morning of August 11th, 1831, when the barracks were blown down, killing the sergeant-major, a sergeant, and five privates, but leaving the baby unharmed in its cradle under a heap of ruins. Major Power resigned his commission in 1833, and for many years spent the wandering life which was then usual with half-pay officers who had no private means. His son, therefore, was educated for short periods at schools in Gloucester, Liverpool, Cheltenham, Leamington, and Whitby, never remaining long enough at any one place to receive a thorough grounding in classics and mathematics. His name appears in the lists of Cheltenham College as a day boy admitted at Easter Term, 1842, the college having been opened in the previous autumn. Destined for the army he seems to have drifted into medicine almost by accident, for he used to say that his father only knew of two classes in the profession—the regimental doctor and the man who kept an open surgery. He was apprenticed in 1844 to Mr. Thomas Lowe Wheeler, who was afterwards Chairman of the Board of Examiners at the Apothecaries' Hall. Mr. Wheeler was the son of Thomas Wheeler (1754–1847) the botanist who was apothecary to St. Bartholomew's Hospital. The apprentice who lived with his master in Newcastle Court, Gracechurch Street, entered St. Bartholomew's Hospital and was diligent in attending the early morning botanical lectures and the "herborisings" which were then a feature of the medical curriculum. This botanical training won for him the Galen silver medal and the Linnean silver medal at the Society of Apothecaries, of which body he was admitted a Licentiate in 1851. In the same year he took the diploma of M.R.C.S., and on December 1st, 1854, he was admitted a Fellow of the Royal College of Surgeons of England by examination. At St. Bartholomew's Hospital he soon made the acquaintance of William Savory, who, like himself, was a friendless lad without introductions. The acquaintance soon ripened into a friendship which lasted as a lifelong intimacy. At the University of London the two young friends had a brilliant career. Power took the prize in chemistry at the matriculation, the exhibition and gold medal in anatomy and physiology, and the gold medal in structural and physiological botany at the intermediate examination in medicine in 1852; the scholarship and gold medal in physiology and comparative anatomy and the scholarship and gold medal in surgery at the final M.B., graduating in 1855, a year after he had married his playmate and first cousin, Ann, daughter of Thomas Simpson, of Meadowfield, Whitby.



Photograph by HENRY POWER. *Martin Jacolette, London.*

In 1851 Mr. Power was appointed Demonstrator of Anatomy at the Westminster Hospital, and for the ensuing ten years he lectured successively on comparative anatomy, human anatomy, and physiology, whilst he made his living by coaching and writing for the medical journals. He was appointed Assistant Surgeon to the Royal Westminster Ophthalmic Hospital in 1856, and Assistant Surgeon to the Westminster Hospital in 1857. The latter post he resigned in 1867 when he was elected Ophthalmic Surgeon to St. George's Hospital. At the Westminster Ophthalmic Hospital he had as colleagues Surgeon-General Guthrie, Mr. Hancock, and Mr. Jabez Hogg, and he there collected the material and made the water-colour sketches which afterwards appeared in his *Illustrations of Some of the Principal Diseases of the Eye*. In 1866 he moved from Grosvenor Terrace, Pimlico, now a part of the Belgrave Road, near Warwick Square, to Upper Seymour Street, Portman Square, and in 1870 he removed to Great Cumberland Place, where he spent the remainder of his professional life. In 1870 he was nominated the first Ophthalmic Surgeon to the newly established department for diseases of the eye at St. Bartholomew's Hospital, having Mr. Bowater J. Vernon as his colleague. The appointment was eminently satisfactory both to the school and to the individuals. Every source of friction quickly disappeared, and the department assumed the high position it has ever since maintained. About this time Mr. Power was for twelve years Ophthalmic Surgeon at St. Bartholomew's Hospital, Rochester. He went down every Wednesday afternoon at two o'clock and returned by the boat train at six. The journey was a source of constant pleasure to him because he always made friends with his fellow travellers on the way.

Mr. Power's energies were not exhausted by the exigencies of a large practice and the teaching at his medical school. He was active as an examiner at the London University with Huxley as a colleague; at the University of Oxford, where he learnt to appreciate Rolleston; at Cambridge where he made friends with Humphry and

Michael Foster, and at Durham, where he was welcomed by Philipson.

At the Royal College of Surgeons of England he filled nearly all the official positions. He was a member of the Board of Examiners in Anatomy and Physiology from 1875 to 1880, and again from 1881 to 1884, and on the reconstituted Board as an Examiner in Physiology from 1884 to 1886, and as an Examiner for the F.R.C.S. in Physiology from 1884 to 1886. He served as a member of the Council from 1879 to 1890, and was a Vice-President for the year 1885. He delivered the Arris and Gale Lectures on Anatomy and Physiology in the years 1882–3 was Hunterian Professor of Surgery and Pathology in 1885–1886; Bradshaw Lecturer in 1886, and Hunterian Orator in 1889, when he delivered the oration without notes.

At the Royal Veterinary College in Camden Town he was Professor of Physiology from 1881 to 1904, and he was the friend and trusted adviser of many generations of students, who testified to their love and respect on his retirement by presenting him with a comfortable reading chair, whilst those who were in South Africa sent him a magnificent silver lamp.

From 1890–1893 he was President of the Ophthalmological Society of the United Kingdom. He was President of the Harveian Society for the years 1880 and 1881, serving a double term of office. He was a Vice-President of the Royal Medical and Chirurgical Society 1892–3, and he was also President of the Society for Employing the Blind as Masseurs. For many years he was Surgeon to the Linen and Woollen Drapers' Benevolent Fund and to the Artists' Benevolent Fund.

Mr. Power had held offices at six of the annual meetings of the British Medical Association. He had been Secretary, Vice-President, and President respectively of the Section of Physiology in 1869 (Leeds), 1878 (Bath), and 1879 (Cork); he was Vice-President of the Section of Ophthalmology in 1880, when the meeting was held at Cambridge, and President of the Section in 1895 in London, as well as President of the Combined Section of Ophthalmology and Otology of the meeting in 1885 in Cardiff.

Mr. Power was a first-rate field botanist throughout his long life. He had some knowledge of music, and used to play the violin. His power of drawing and of sketching from nature was innate. It was clearly inherited from his father, who received a pair of colours from H.R.H. the Duke of York in acknowledgement of two framed sketches which the boy sent with a letter asking for a commission in his father's old regiment. The faculty was transmitted to one of Mr. Henry Power's daughters—Miss Lucy B. Power—who was making a name for herself as a portrait painter when she was drowned accidentally at Whitby with a grand-daughter in 1898. This tragedy saddened the remainder of her father's life; the horror of the scene haunted him to the end, and took away much of his pleasure in living. Shortly afterwards he retired from practice, settled at Whitby in a fifteenth-century house, which he had restored some years previously, and filled up his time with many useful works. He enjoyed excellent health until November of last year, when he strained his right heart by climbing the steps to the parish church one Sunday. He was seized with signs of acute dilatation, and suffered many distressing attacks of dyspnœa, which culminated on January 17th. He became unconscious in the evening, and died quietly on the morning of January 18th.

He leaves his wife, four sons, and four daughters, and was buried at Whitby on Saturday, January 21st. The funeral service was conducted by his friend, Canon Austen, M.A., the Rector of Whitby, who came over specially from York for the purpose. He was laid to rest amongst a wealth of flowers, sent by friends and former colleagues from all parts, in the cemetery which is so beautifully situated between the sea and the high moors.

Mr. F. RICHARDSON CROSS writes: I take the opportunity offered of adding my small tribute to the memory of Mr. Henry Power. Though he had reached a ripe old age, the news of his death will be received in universal sorrow by the members of the profession, among whom he was for so many years a respected and beloved leader. His handsome presence, his charming personalty and courteous manner were combined with an obvious honesty of purpose—while his striking modesty sometimes led one to forget the very high standard of his natural ability and the enormous amount of good work that he had accomplished. His distinguished successes as a student, particularly in Physiology and in Human and Comparative Anatomy, naturally gave him a tendency towards the more purely scientific aspects of medical science, and his continuous studies in Physiology and Histology as Teacher, Author, and Examiner, must naturally have given him a high scientific standard in his clinical work. Fortunately for that speciality, he selected Ophthalmology for the surgical side of his career; and, combining with his high scientific attainments a keen perception, with accuracy of judgement and practical common sense, he soon became one of the pioneers of Ophthalmology in this country. The publication of *Stricker's Histology*, in which each organ and structure was exhaustively described by the leading German expert on that subject, gave an enormous advance to the knowledge of minute anatomy. Fortunately for English readers, the Sydenham Society could find in Power a translator well versed in the German language, and at the same time with a special knowledge of the wide range of subjects dealt with. The time of the publication of these volumes has an historical interest in regard to Power's position as an ophthalmic surgeon. In the first volume (1870) he appears as Ophthalmic Surgeon to St. George's Hospital; in the second (1872) he is Ophthalmic Surgeon to St. Bartholomew's. A paper by him in the *St. Bartholomew's Hospital Reports* of 1871 describes the ophthalmic department just then founded under himself and Mr. Vernon, and throws some interesting light on the treatment of eye diseases at that time in the general hospitals. Probably most of the eye patients in the neighbourhood of St. Bartholomew's went to Moorfields. Among many other books he edited may be mentioned the *Lexicon of Medicine and the Allied Sciences*, in which he was associated with Dr. Sedgwick—a piece of laborious and valuable work. I remember him a very successful President of the Ophthalmological Society and a very popular member of the College of Surgeons Council Club, but he had retired from the council some time before I was elected. As a consultant his advice was always most helpful and reliable; he was a most agreeable member of any social or professional gathering, and was a generous and interesting host both in London and in his house at Whitby. Every one who was ever brought into personal relations with him, as well as patients and friends, will sincerely mourn his loss.

JAMES THOMAS JAMES, F.R.C.S.,

FORMERLY SURGEON, CENTRAL LONDON OPHTHALMIC HOSPITAL.

WE regret to record the death on January 10th or Dr. James Thomas James, of Harley Street, in circumstances which led to the holding of an inquest. He received his medical education as a student of the Middlesex Hospital, where his career was one of marked distinction. The Broderip scholarship was awarded him and he carried off in turn the Governor's prize and distinctions in nearly all subjects of the curriculum of his time. He became in turn L.S.A. in 1878, M.R.C.S. in 1879, and L.R.C.P. in 1881, and four years later a Fellow of the Royal College of Surgeons. A year later, again, he graduated M.B. at the University of Durham, and finally in 1890 proceeded to the M.D. of that university. Meantime he had held practically all the resident appointments open to him at his own hospital, including periods of office as House-Surgeon House-Physician, and Resident Obstetric Officer. Later on he became a Clinical Assistant at the Royal London Ophthalmic Hospital, and was subsequently appointed to the staff of the Central London Hospital; his post as surgeon there he resigned a few years ago. At the time of his death he was a member of the British Medical Association and of the Ophthalmological Society, and a Fellow of the Royal Society of Medicine. His personal character is well portrayed in the following lines, penned by one who knew him well: "By the death of Dr. J. T. James the profession has lost a sterling man whose absolute integrity was beyond reproach. He was known and esteemed by a large number of people, and the great confidence reposed in him by his patients was not only due to his undoubted skill as a medical man but also to the

knowledge of the fact that they had in him a wise counsellor, a strong personality, and a nature that was incapable of stooping to anything that looked like trickery or sham. It was difficult for any one to get to know him well, but to those few who were permitted to see the real man there was revealed a strong, simple, and lofty character, which made intimate acquaintance partake of the nature of a privilege. From the day that he obtained his qualifications to the end he worked with but brief holidays. Latterly, indifferent health had its effect on a nature always reserved and sensitive, and now that he has gone very many are conscious of a great loss sustained." It may be added that Dr. James, who was a very hard worker and also a sufferer from insomnia, had an attack of influenza last summer, and since that date had been subject to fits of depression.

WALTER RIDLEY, M.B., M.S., F.R.C.S.,
NEWCASTLE-UPON-TYNE.

AFTER an extremely trying illness of a few weeks' duration Mr. Walter Ridley died in Newcastle-upon-Tyne on January 13th, 1911, at the comparatively early age of 49, the cause of death being rheumatism and heart disease. His illness was the result of a wetting caught when visiting a patient in the country.

Walter Ridley was born in Newcastle on October 6th, 1861, and received his professional education in Newcastle, Edinburgh and London. He was a distinguished student of the College of Medicine, and took the Mastership in Surgery of the University of Durham with first-class honours. After passing through the residential and minor outdoor surgical appointments, Mr Ridley was appointed Surgeon to the Royal Infirmary, and subsequently Surgeon in Charge of the Throat and Ear Department, a department to the establishment and development of which he largely contributed. In this special work he was seen at his best. He was a careful diagnostician, and a successful surgeon. There have been few men more genial than Walter Ridley. Of him it may be said he had no enemies. He was a general favourite. In addition to being a good operator, he was fond of outdoor sport, golf in later years being his special recreation.

He will be much missed alike by the medical profession and by the wide circle of friends to whom he had endeared himself. The interment at Elswick Cemetery was attended by a large number of the medical men of the city and district.

BANFIELD TEAGUE VIVIAN, L.S.A.,
CORNWALL.

MR. BANFIELD VIVIAN died at his residence at Hayle, Cornwall, on January 13th, in the 90th year of his age. There has thus passed away the oldest member of the medical profession in Cornwall, and probably one of the oldest in England.

He was a distinct link with the past, for he was one of the few survivors of the students of Hunter's School of Anatomy, and one of the few medical men who have gone through life with a single qualification—the Licence of the Society of Apothecaries. He received that diploma when 30 years of age, and had thus been a qualified member of the medical profession for sixty years; for about fifty of these he was Medical Officer of the Helston Union. His practice, which was a large one, he acquired partly by his own efforts, partly by inheritance from his father, whose eldest son he was. For many years Dr. Vivian was assisted in his work by a brother, and on the death of the latter some fifteen or sixteen years ago he began to give up practice himself, though he continued to attend until quite a recent period a certain number of his old patients. Despite his age, Dr. Vivian was a familiar personage to the present generation, his tall wiry figure, snow-white hair, and moustache being constantly to be seen in the locality in which he resided, until within the last few months. While still young, Dr. Vivian excelled in sport, held a commission as honorary surgeon to the 1st Cornwall Volunteer Artillery, and often contributed to the success of local festivities by giving firework displays. Another hobby was photography, his knowledge of which dated back practically to the very first days of that art. Dr. Vivian, though shy in manner and somewhat brusque with strangers, enjoyed the affection and esteem of all classes. He was never married.

DEATHS IN THE PROFESSION ABROAD.—Among the members of the medical profession in foreign countries who have recently died are: Dr. Guillery, sometime Professor in the University of Brussels, member of the Academy of Medicine and of numerous other learned bodies, Belgian and foreign, aged 90; and Professor K. F. Mosler, for many years chief of the Medical Clinic of the University of Greifswald, and author, among many other contributions to medical literature, of the articles on leukaemia, and diseases of the pancreas in Ziemssen's *Cyclopaedia of Medicine*, and of that on animal parasites in Nothnagel's *Handbook*, aged 80.

The Services.

SCOTTISH TERRITORIAL RED CROSS BRIGADE.

DURING the half year ending December 31st, 1910, 57 voluntary aid detachments of the Scottish Territorial Red Cross Brigade were formed, and several additional detachments were added during the first fortnight of the present year. Of the 57, 16 were male detachments with a personnel of 567 men, and 41 female with a personnel of 1,243, a total personnel of 1,810 members. Of these detachments, Fifeshire contributes 20 and Perthshire 14. Lanarkshire has only now begun to organize the work. The Duchess of Hamilton held an At Home at Hamilton Palace on January 14th, when Miss Haldane delivered an address; and at Motherwell Lord Hamilton of Dalzell has secured the formation of a working committee. The Duchess of Roxburghe has initiated the movement in Kelso, and Glasgow will now take up the work, a meeting having been called by the Lord Provost for January 31st in the City Chambers to hear explanatory addresses on the scheme. It is expected that during the next six months a very large addition to the Red Cross Brigade will be recorded from all parts of the country.

THE TERRITORIAL MEDICAL SERVICE.

CAPTAIN F. A. STEPHENS, R.A.M.C., Aston, Birmingham, writes: I have read with interest the letter of Colonel M. D. O'Connor, M.D., R.P., quoted in the BRITISH MEDICAL JOURNAL of January 14th, in which he contends that the existing organization of the Territorial Medical Service for the removal of sick and wounded is unnecessary, and that it would be better to leave them, protected by the Geneva Convention, in fixed hospitals within the area of military operations. This is a bitter pill for many of our profession, who have given a great amount of time and trouble to make efficient various units of that service, and I ask his forbearance and yours in drawing attention to a point which may make the swallowing of that pill less unpleasant, or unnecessary.

It is, perhaps, the most important of the considerations which those responsible for the present organization had in view when they designed it, and it is the point above all others which the staff of an army and the commanders of field medical units would keep in view in dealing with the problems of the disposal of sick and wounded during a campaign in this country. I refer to the fact that the Geneva Convention does not protect sick and wounded from being held by an enemy as prisoners of war.

The majority of sick and wounded can be put back into the fighting line in a few weeks or a few days. These are the cases which an enemy would take prisoner, and it is for the saving of these cases from capture to fight again that the existing organization is particularly designed in civilized warfare. This view is borne out by the fact that a similar organization is used by other European Powers who are, presumably, prepared to carry out military operations under Red Cross rules in their own territories.

The point that the chief function of medical as well as of other troops is to defeat the enemy, is one that is sometimes difficult to keep in the foreground.

TERRITORIAL FORCE.

DIFFICULTIES IN CONNEXION WITH THE MEDICAL ADMINISTRATION AND ORGANIZATION OF THE TERRITORIAL FORCE.

A.M.O. writes: While in the main agreeing with the excellent comments in the article with this title in the BRITISH MEDICAL JOURNAL of December 24th, p. 2008, I think it will be wiser to concentrate all our efforts on attaining what is of vital importance to the medical profession, namely:

1. To restore to the A.M.O. his original position as a brigade commander;
2. To give him and his staff officer the same pay and allowance as to combatants;
3. To remove the restrictions as to uniform. The A.M.O. is the only officer condemned to wear silver, and if physician or surgeon to the Sovereign, can only wear his aiguilettes in full dress—that is, only at Court;
4. To work the schools of instruction on the lines best suited to each locality.

Medical News.

THE late Dr. William Hoffmeister, M.V.O., of Cowes, left estate valued at £4,080.

THE Guardians of the City of London have given their permission for the medical staff at Homerton Infirmary to carry on cancer research work.

THE Corporation of Glasgow has subscribed £100 in aid of the British Section of the International Hygiene Exhibition at Dresden.

THE next examination of candidates for twelve commissions in the Royal Navy Medical Service will be held at the Examination Hall, Victoria Embankment, Thames Embankment, on May 15th and the following days.

AT a meeting of the North of England Obstetrical and Gynaecological Society on January 20th, Dr. J. B. Hellier of Leeds was elected president in succession to Dr. W. K. Walls of Manchester.

AT a meeting of the Eugenics Education Society at the Caxton Hall, Westminster, on Thursday next, at 5.15 p.m., Captain A. J. St. John, Secretary of the Penal Reform League, will read a paper on crime and eugenics in America.

A LEGACY of £4,000 has been left to the hospital at Perpignan with the condition attached that the nursing staff shall not be secularized. The President has issued a decree authorizing the hospital to accept the legacy and to retain the services of nuns as nurses.

A DISCUSSION on surface water supplies for small communities will be opened by Mr. A. P. I. Cotterell, M.Inst.C.E., before the Royal Sanitary Institute, 90, Buckingham Palace Road, S.W., on February 14th. Dr. Louis C. Parkes will take the chair at 8 p.m.

THE British Institute of Social Service and the Coal Smoke Abatement Society will hold a conference on the smoke evil at 4, Tavistock Square, W.C., on Monday next. The chair will be taken by Sir William Richmond at 5 p.m. Further particulars can be obtained from the Honorary Secretary at the address mentioned.

THE Lettsomian lectures will be delivered before the Medical Society of London by Mr. W. F. Haslam, M.B., F.R.C.S., Surgeon to the Birmingham General Hospital, on February 6th, February 20th, and March 6th, at 9 p.m. on each day. The subject is a review of the operations for stone in the male bladder.

WE are asked to state that the Dermatological Society recently formed in London is to be known as the New Dermatological Society, to avoid confusion with the Dermatological Society of London merged some years ago with the Dermatological Section of the Royal Society of Medicine.

AT the joint meeting of the Illuminating Engineering Society and the Library Association, to be held at the Royal Society of Arts, John Street, Adelphi, on Tuesday next at 8 p.m., the discussion on library lighting, opened at the last meeting, will be resumed; the chair will be taken by the President, Professor Silvanus Thompson.

IN consequence of the fall in the price of india-rubber a general reduction in the price of tyres for motor cars is to be expected. The Continental Tyre and Rubber Company (Great Britain), Limited, announce that they reduced their prices on January 17th, and will supply a price list on application to 102–8, Clerkenwell Road, E.C. Argylls, Limited, also give notice that the price of their cars will be subject to a reduction corresponding to the diminution in the price of tyres.

HIS EXCELLENCY THE EARL OF ABERDEEN, K.T., has consented to act as patron of the twenty-sixth Annual Congress of the Royal Sanitary Institute to be held at Belfast from July 24th till 29th, 1911. The Right Hon. Lord Dunleath, D.L., J.P., has consented to act as president of the congress. A public meeting to make preliminary arrangements for the meeting will be held at the City Hall, Belfast, on Tuesday, January 31st.

FOUR lectures on recent progress in physiological chemistry will be delivered in the Physiological Laboratory, King's College, London, by Dr. Otto Rosenheim, at 4.30 p.m. on January 30th, February 13th, February 27th, and March 13th. The subjects dealt with will be inorganic substances, carbohydrates, fats, proteins, lipoids, the chemistry of colloids and enzymes. The lectures are free to all members of King's College, to all students of medicine, to all internal students of the University of London, and to medical men on presentation of their cards.

Letters, Notes, and Answers.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Office, 429, Strand, W.C., on receipt of proof.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR the BRITISH MEDICAL JOURNAL is *Aitiology, London*. The telegraphic address of the BRITISH MEDICAL JOURNAL is *Articulate, London*.

TELEPHONE (National):—
2631, Gerrard, EDITOR, BRITISH MEDICAL JOURNAL.
2630, Gerrard, BRITISH MEDICAL ASSOCIATION.
2634, Gerrard, MEDICAL SECRETARY.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

A.M., M.B. wishes to know the cause and remedy for a condition of the molar teeth in which the outer surface becomes very tender to touch, although the decay is so slight that the dentist can do nothing in the way of filling.

LETTERS, NOTES, ETC.

MEMBERS who may have answered an advertisement for a medical officer as consultant to a company, replies to be addressed to No. 378, are asked to communicate with this office.

THE response to the application of the secretary of the Medical Missions' Department of the Society for the Propagation of the Gospel in Foreign Parts for medical journals to send to the medical missionaries in the foreign field has been so ready that further copies are not required at present.

RESINOL AND RESINOL SOAP.

RESINOL is a proprietary ointment largely advertised to the medical profession for the treatment of skin diseases. A pot priced 2s 6d. was found to contain a little over 1 oz.; analysis gave the results recorded below. It is necessary to point out, however, that while exact determinations can be made of such ingredients as bismuth and zinc compounds, it is not possible to separate completely all the constituents of a complex ointment, and especially fatty or waxy constituents of the basis, and the figures must therefore be regarded as near approximations only:

Resorcin	3.9	per cent.
Oil of birch tar	3.0	,,
Zinc oxide	4.7	,,
Bismuth subnitrate ...	9.7	,,
Lanoline	5.0	,,
Maize starch	10.0	,,
Ceresin (?)	2.0	,,
Soft paraffin ... to	100	

The substance described as "ceresin (?)" was apparently of waxy character but unsaponifiable, and therefore not a true wax; its melting point was too high for ordinary hard paraffin, but agreed with that of ceresin, which is a form of ozokerit or mineral wax.

Resinol Soap is a brown soap, with a slight odour of birch tar oil. Analysis showed it to contain 87.3 per cent. of real anhydrous soap, which was perfectly neutral, with

Soft paraffin	0.5 per cent.
Bismuth subnitrate ...	0.05 ,,
Zinc oxide	trace.
Resorcin	,,
Lanoline	,,
Colouring matter and moisture.	

This corresponds to the presence of about three-quarters per cent. of Resinol.

CORRECTION.—The case referred to by Dr. J. J. Stack, in the JOURNAL of January 21st, page 180, under the heading, "An unusual aural reflex," was under the care of Dr. Percy Jakins, of London, not "Dr. Percy Jenkins," as incorrectly printed.

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

	£	s.	d.
Eight lines and under	0	4	0
Each additional line	0	0	6
A whole column	2	13	4
A page	8	0	0

An average line contains six words.

All remittances by Post Office Orders must be made payable to the British Medical Association at the General Post Office, London. No responsibility will be accepted for any such remittance not so safeguarded.

Advertisements should be delivered, addressed to the Manager, 429, Strand, London, not later than the first post on Wednesday morning preceding publication, and, if not paid for at the time, should be accompanied by a reference.

NOTE.—It is against the rules of the Post Office to receive *poste Restante* letters addressed either in initials or numbers.